

10/584673

\*\*\*\*\* QUERY RESULTS \*\*\*\*\*

=> d his l46

(FILE 'WPIX' ENTERED AT 10:44:07 ON 20 NOV 2009)

L46 8 S L44 OR L45

=> d que l46

L6 245795 SEA FILE=HCAPLUS ABB=ON PLU=ON UREA  
L9 4275 SEA FILE=HCAPLUS ABB=ON PLU=ON CARBAMIDE OR CARBONYL DIAMIDE  
OR CARBONYL DIAMINE  
L10 179440 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYACRYLAMIDE OR POLYMETHACRY  
LAMIDE OR POLYVINYL ALCOHOL OR POLYVINYLPIRROLIDONE OR  
POLYVINYLACETATE  
L13 QUE ABB=ON PLU=ON (POLYACRYLIC# OR POLYMETHACRYLIC# OR  
POLYMETHACRYLATE) OR (POLY) (A) (ACRYLIC# OR ACRYLATE# O  
R METHACRYLIC# OR METHACRYLATE#)  
L14 QUE ABB=ON PLU=ON (POLY OR POLYM? OR COPOLYM? OR HOPOL  
YM? OR RESIN?) (2A) (ACRYLATE# OR METHACRYLATE# OR ACRYLI  
C# OR METHACRYLIC#)  
L22 133498 SEA FILE=HCAPLUS ABB=ON PLU=ON CONCRETE  
L29 4142 SEA FILE=WPIX ABB=ON PLU=ON (L6 OR L9) AND L10  
L30 5748 SEA FILE=WPIX ABB=ON PLU=ON (L6 OR L9) AND (L13 OR L14)  
L31 48 SEA FILE=WPIX ABB=ON PLU=ON L29 AND L22  
L32 114 SEA FILE=WPIX ABB=ON PLU=ON L30 AND L22  
L39 43094 SEA FILE=WPIX ABB=ON PLU=ON (CONCRETE OR CEMENT OR ASPHALT)  
(2A) (MIX? OR COMPOSITION# OR BLEND? OR FLOWABLE)  
L40 10 SEA FILE=WPIX ABB=ON PLU=ON L31 AND L39  
L41 19 SEA FILE=WPIX ABB=ON PLU=ON L32 AND L39  
L42 26 SEA FILE=WPIX ABB=ON PLU=ON L40 OR L41  
L43 1042040 SEA FILE=WPIX ABB=ON PLU=ON (COAT# OR COATED OR COATING OR  
LUBRICAT? OR ANTIFRICT? OR ANTI(W)FRICT?)  
L44 8 SEA FILE=WPIX ABB=ON PLU=ON L42 AND L43  
L45 2 SEA FILE=WPIX ABB=ON PLU=ON L42 AND (PRIMER OR PRIMING OR  
PRIME)  
L46 8 SEA FILE=WPIX ABB=ON PLU=ON L44 OR L45

=> d l46 1-8 iall abeq tech abex

L46 ANSWER 1 OF 8 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN  
ACCESSION NUMBER: 2008-D99212 [28] WPIX  
DOC. NO. CPI: C2008-131422 [28]  
TITLE: Substrate for vehicles, e.g. truck, comprises finishing  
layer having scratch and mar resistance, where finishing  
layer is formed by applying coating composition  
containing dispersed silica nano-particles dispersed in  
dispersing agent  
DERWENT CLASS: A21; A26; A82; A85; A93; A95; G02; L03  
INVENTOR: LIN J  
PATENT ASSIGNEE: (DUPO-C) DU PONT DE NEMOURS & CO E I; (LINJ-I) LIN J;  
(DUPO-C) DU PONT DE NEMOURS&CO E I  
COUNTRY COUNT: 121

PATENT INFORMATION:

PATENT NO	KIND DATE	WEEK	LA	PG	MAIN IPC
WO 2007146353	A2 20071221	(200828)*	EN	58[0]	
WO 2007146353	A3 20080117	(200828)	EN		
US 20080160289	A1 20080703	(200846)	EN		

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EP 2027224 A2 20090225 (200916) EN  
CA 2649178 A1 20071221 (200946) EN  
MX 2008015712 A1 20081231 (200956) ES

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2007146353	A2	WO 2007-US13912	20070614
US 20080160289	A1 Provisional	US 2006-813458P	20060614
US 20080160289	A1 Provisional	US 2006-858738P	20061114
CA 2649178	A1	CA 2007-2649178	20070614
EP 2027224	A2	EP 2007-809531	20070614
US 20080160289	A1	US 2007-818460	20070614
EP 2027224	A2 PCT Application	WO 2007-US13912	20070614
CA 2649178	A1 PCT Application	WO 2007-US13912	20070614
CA 2649178	A1 PCT Nat. Entry	CA 2007-2649178	20081007
MX 2008015712	A1 PCT Application	WO 2007-US13912	20070614
MX 2008015712	A1	MX 2008-15712	20081209

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 2027224	A2 Based on	WO 2007146353 A
CA 2649178	A1 Based on	WO 2007146353 A
MX 2008015712	A1 Based on	WO 2007146353 A

PRIORITY APPLN. INFO: US 2006-858738P 20061114  
US 2006-813458P 20060614  
US 2007-818460 20070614  
US 2006-813458P 20060614  
US 2006-858738P 20061114

## INT. PATENT CLASSIF.:

IPC ORIGINAL: B32B0005-16 [I,A]; B32B0005-16 [I,C]; C09C0001-28 [I,C];  
C09C0001-28 [I,C]; C09C0001-28 [I,C]; C09C0001-30 [I,A];  
C09C0001-30 [I,A]; C09D0201-02 [I,C]; C09D0201-02 [I,A];  
C09D0201-02 [I,C]; C09D0201-02 [I,A]; C09D0201-02 [I,C];  
C09D0007-12 [I,C]; C09D0007-12 [I,A]; C09D0007-12 [I,C];  
C09D0007-12 [I,A]; C09D0007-12 [I,C]

ECLA: C09C0001-30D12; C09D0007-12D2B; C09D0133-06B4;  
C09D0143-04; C09D0201-02

ICO: M01P0004:62; M01P0004:64; M08K0003:36; M08K0005:00P2;  
M08K0009:04; M08K0009:08; Y01N0006:00

USCLASS NCLM: 428/327.000

## BASIC ABSTRACT:

WO 2007146353 A2 UPAB: 20090313

NOVELTY - A substrate comprises a finishing layer having scratch and mar resistance, where the finishing layer is formed by applying a coating composition containing polymer; crosslinking agent; carrier; and dispersed silica nano-particles having a particle size of 1-500 nm and are dispersed in dispersing agent that contains oligomer having reactive groups; or a mixture of oligomers or part with a film-forming polymer and/or coupling agent, where upon curing of the coating composition, silica nano-particle agglomerates are formed having a particle size of 10-5000 nm.

DETAILED DESCRIPTION - A substrate comprises a finishing layer having scratch and mar resistance, where the finishing layer is formed by applying a coating composition to the substrate and curing the coating composition. The coating composition comprises a film forming polymer having at least one reactive group; at least one crosslinking agent that is reactive with the film

forming polymer; an organic liquid carrier; and dispersed silica nano-particles (0.1-20 weight%, based on the weight of the film forming polymer). The reactive group is selected from hydroxyl, isocyanate, carbamate, silane, hydroxyl silane, alkoxy silane, epoxy, carboxyl and/or free radically polymerizable ethylenically unsaturated group. The silica nano-particles have a particle size of 1-500 nm and are dispersed with dispersing agent (at least 0.001 parts by weight, based on the weight of the silica nano-particles). The dispersing agent contains a branched or hyperbranched oligomer having at least two reactive groups being reactive with the silica nano-particles; or a mixture of the oligomers or part with either a film-forming polymer and/or a low molecular weight coupling agent, where upon curing of the coating composition, silica nano-particle agglomerates are formed having a particle size of 10-5000 nm.

USE - As a substrate for vehicles, such as automobiles, truck, beverage bodies, utility bodies, ready mix concrete delivery vehicle bodies, waste hauling vehicle bodies, and fire and emergency vehicle bodies, buses, farm and construction equipment, truck caps and covers, commercial trailers, consumer trailers, recreational vehicles (such as motor homes, campers, conversion vans, vans, pleasure vehicles, pleasure craft snow mobiles, all terrain vehicles, personal watercraft, motorcycles, boats, and aircraft); cement and wood floors; walls of commercial and residential structures, such office buildings and homes; amusement park equipment; concrete surfaces, such as parking lots and drive ways; concrete road surface, wood substrates, marine surfaces; outdoor structures, such as bridges, towers; coil coating; railroad cars; printed circuit boards; machinery; fiberglass structures; sporting goods (including uni-, bi-, tri-, and motorcycles); and sporting equipment.

ADVANTAGE - The coating composition of silica nano-particles has enhanced mar and is scratch resistance under wet conditions and has excellent appearance and good optical properties. MANUAL CODE: CPI: A08-C01; A08-D01; A08-R06A; A12-B01; G02-A05;

G02-A05B; G02-A05F; G02-A05K; L03-H05; L03-J

#### TECH

INORGANIC CHEMISTRY - Preferred Components: The silica nano-particles have active silane of formula  $-(Y1-Si(R)nX)3n$ . The silica nano-particles are dispersed with a mixture of a trialkoxy silane oligomer and either a hydroxy acrylosilane polymer or an epoxy acrylosilane polymer. The silica nano-particles are selected fumed silica, colloidal silica, and amorphous silica. The silica nano-particles have reactive SiOH groups or anhydrous SiO<sub>2</sub> groups.

Y1=organic or an inorganic linking group that links the silica atom to the silica nano-particle;

n=0-2;

R=oxysilyl or hydrocarbyl (optionally substituted with at least one of O, N, S, P, and Si);

X=1-4C alkoxy, 6-20C aryloxy, 1-6C acyloxy, H, halo, amine, amide, imidazole, oxazolidinone, urea, hydroxylamine, hydroxyl, or carbamate.

ORGANIC CHEMISTRY - Preferred Components: The oligomer comprises a trialkoxy silane oligomer (preferably tris(2-trimethoxy silyl ethyl) cyclohexane). The cross-linking agent is selected from alkylated melamine formaldehyde cross-linking agent, polyisocyanate cross-linking agent, and blocked polyisocyanate cross-linking agent. The cross-linking group is chosen from from alkylated melamine formaldehydes, polyisocyanates, blocked polyisocyanates, carboxyl groups and/or epoxy groups. The low molecular weight coupling agent is gamma-glycidyloxypropyltrimethoxysilane or 3-glycidyloxypropylmethyldiethoxysilane.

POLYMERS - Preferred Components: The film forming polymer comprises a hydroxy acrylosilane polymer or an epoxy acrylosilane polymer. The substrate uses a low molecular weight coupling agent. The film forming polymer comprises an acrylic polymer of

alkyl(meth)acrylates and hydroxyl alkyl(meth)acrylates. The acrylic polymer further comprises alkoxy silane constituents. The film forming polymer comprises a (meth)acrylate polymer having reactive groups chosen from hydroxyl groups, carbamate groups, silane groups, epoxy groups, carboxyl groups, hydroxy silane groups and/or alkoxy silane groups. The film forming polymer comprises a (meth)acrylate polymer having free radically polymerizable ethylenically unsaturated groups.

ABEX EXAMPLE - A silane polymer 1 was prepared as follows: acrylosilane polymer solutions were prepared by copolymerizing in the presence of a 2/1 Solvesso (RTM: 100 aromatic solvent/butanol mixture), monomer mixtures of styrene (25 parts by weight (pbw)), hydroxypropyl acrylate (HPA) (20 pbw), Silquest A-174 (RTM: ethacryloxypropyl trimethoxy silane) (MAPTS) (30 pbw), butyl acrylate (BA) (2 pbw), and isobutyl methacrylate (IBMA) (23 pbw) in the presence of Vazo (RTM: 67 (2,2'azobis(2-methylbutyronitrile)) (8 pbw). The resulting acrylosilane polymer solution has a 71% solids content and a viscosity measured at 25degreesC. The polymer has a weight average molecular weight of approximately 4500 gram/mole. OH-containing carbamate silane oligomers was prepared for use in silica dispersion preparation. The OH-containing carbamate silane oligomers was prepared by using carbamate silane oilgomer control, cabamate silane oligomer 1. The carbamate silane oligomer 1 is prepared as follows: PRIPOL 2033 (RTM: organic dimer diol) having an OH value of 195-206) was mixed with MAK, 0.01% of dibutyl tin dilaurate, and Silquest A-Link 35 in NCO:OH molar ratio of 1:2. The mixture was heated for 16 hours at 43degreesC, and then cooled to room temperature. The resulting oligomer solution had a 50% solids content. The dispersion containing (parts by weight): Nalco 1057 (RTM: solvent base sol) (30); silane polymer 1 (7.5); and carbamate silane oligomer 1 (30) was prepared and incorporated into clear coating composition. A clearcoat composition (C1) was prepared by adding the silica dispersion (49.5 parts by weight) to clearcoat containing Gen 4ES (RTM: clearcoat) (210 parts by weight) that was reduced with 10 wt.% of ethyl 3-ethoxy propionate. The clearcoat composition was applied as a clear coat and tested for scratch and mar resistance. The composition (C1) was reduced to a spray viscosity with conventional solvents and was hand sprayed to a thickness of 50 microns onto a panel coated with a solvent-borne black base-coat over a steel substrate which was already coated with a layer each of electro-coat and primer surfacer. The base coats were applied in two coats by hand with a 60 second flash period between the first and the second coat over a primed, electro-coated steel substrate. The spray booth conditions were 24degreesC and 55% humidity. After a 4-minute flash following the second base coat application, two layers of the clearcoat compositions with a 30 second flash between the first and the second clearcoat application. The booth conditions remained the same. The clear coats were further flashed for 10 minutes and then baked in an oven for 20 minutes at 140degreesC. For scratch and mar resistance tests, the panels were allowed to age for at least 24 hours. The composition showed marked improvement of both dry and wet mar resistance as large amount of tris(2-trimethoxysilylethyl)cyclohexane was used.

L46 ANSWER 2 OF 8 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN  
 ACCESSION NUMBER: 2007-173098 [17] WPIX  
 DOC. NO. CPI: C2007-060949 [17]  
 DOC. NO. NON-CPI: N2007-125169 [17]  
 TITLE: Lacquer coating composition for coating  
 substrate, e.g. vehicle body, comprises triblock  
 copolymer, in which the polymeric blocks are of  
 polymerized ethylenically unsaturated monomers

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DERWENT CLASS: A18; A82; G02; P42  
 INVENTOR: KELLY R J; MA S; KELLY R  
 PATENT ASSIGNEE: (DUPO-C) DU PONT DE NEMOURS & CO E I; (KELL-I) KELLY R J;  
 (MASS-I) MA S; (DUPO-C) DU PONT DE NEMOURS&CO E I  
 COUNTRY COUNT: 113

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20060286302	A1	20061221	(200717)*	EN	17	[0]
WO 2006138311	A1	20061228	(200717)	EN		
EP 1907491	A1	20080409	(200827)	EN		
CA 2612010	A1	20061228	(200868)	EN		
JP 2008546873	W	20081225	(200903)	JA	36	
MX 2007015605	A1	20080301	(200917)	ES		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20060286302	A1	US 2005-155440	20050617
CA 2612010	A1	CA 2006-2612010	20060614
EP 1907491	A1	EP 2006-773038	20060614
WO 2006138311	A1	WO 2006-US22990	20060614
EP 1907491	A1	PCT Application	WO 2006-US22990
CA 2612010	A1	PCT Application	WO 2006-US22990
JP 2008546873	W	PCT Application	WO 2006-US22990
CA 2612010	A1	PCT Nat. Entry	CA 2006-2612010
JP 2008546873	W		JP 2008-517019
MX 2007015605	A1	PCT Application	WO 2006-US22990
MX 2007015605	A1		MX 2007-15605

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1907491	A1	WO 2006138311
CA 2612010	A1	WO 2006138311
JP 2008546873	W	WO 2006138311
MX 2007015605	A1	WO 2006138311

PRIORITY APPLN. INFO: US 2005-155440 20050617

## INT. PATENT CLASSIF.:

IPC ORIGINAL: B05D0003-02 [I,A]; B05D0007-14 [I,A]; B05D0007-14 [I,C];  
 C08F0293-00 [I,A]; C08F0293-00 [I,A]; C08F0293-00 [I,C];  
 C08F0293-00 [I,C]; C08F0297-00 [I,A]; C09D0153-00 [I,A];  
 C09D0153-00 [I,A]; C09D0153-00 [I,C]; C09D0153-00 [I,C];  
 C09D0153-02 [I,A]; C09D0201-00 [I,A]; C09D0201-00 [I,C];  
 C09D0007-12 [I,A]; C09D0007-12 [I,C]

ECLA: C08F0293-00B; C09D0153-00

USCLASS NCLM: 427/372.200

NCLS: 524/505.000; 525/299.000

## JAP. PATENT CLASSIF.:

MAIN/SEC.: B05D0007-14 S; C09D0153-02; C09D0201-00; C09D0007-12  
 FTERM CLASSIF.: 4D075; 4J038; 4D075/BB24.Z; 4D075/BB56.Z; 4D075/CB13;  
 4J038/CG14.1; 4J038/CH01.1; 4J038/CH07.1; 4J038/CQ00.1;  
 4D075/DA27; 4D075/DC12; 4D075/EA23; 4D075/EA43;  
 4D075/EB22; 4J038/GA02; 4J038/GA03; 4J038/GA06;  
 4J038/GA08; 4J038/GA09; 4J038/JC38; 4J038/KA03;

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4J038/KA08; 4J038/KA20; 4J038/MA07; 4J038/MA09;  
4J038/PA18; 4J038/PB07; 4J038/PC02

BASIC ABSTRACT:

US 20060286302 A1 UPAB: 20070313

NOVELTY - Lacquer ~~coating~~ composition comprises triblock copolymer, in which the polymeric blocks are of polymerized ethylenically unsaturated monomers. The first and third blocks differ from the second block by the presence of functional groups that are capable of interacting with each other for the formation of a reversible network. The functional groups are carboxylic acid, hydroxyl, ~~urea~~, amide, and/or ethylene oxide groups.

DETAILED DESCRIPTION - Lacquer ~~coating~~ composition comprises an ABA'-block copolymer, which contains polymeric A block, a polymeric B block, and a polymeric A' block. The polymeric blocks are of polymerized ethylenically unsaturated monomers. The A and A' blocks may have the same or similar composition, and the B block has a different composition from the A and A' blocks. The A and A' blocks differ from the B block by the presence of functional groups that are capable of interacting with each other for the formation of a reversible network. The functional groups are carboxylic acid, hydroxyl, ~~urea~~, amide, and/or ethylene oxide groups. INDEPENDENT CLAIMS are included for:

(1) process for producing a ~~coating~~ on the surface of a substrate, comprising applying a lacquer layer on the surface, and drying the layer to form the ~~coating~~ on the substrate surface; and

(2) ~~coated~~ substrate produced by the process.

USE - The composition is used for producing ~~coating~~ on substrate surface to obtain a ~~coated~~ substrate, e.g. vehicle body or its part. It is used as a pigmented basecoat or clearcoat composition. (All claimed). It is used for automotive refinishing or repairing colored basecoat/clearcoat finishes on auto and truck bodies. It is used for ~~coating~~ automobile bodies, any and all items manufactured and painted by automobile sub-suppliers, frame rails, commercial trucks and truck bodies, beverage bottles, utility bodies, ready mix ~~concrete~~ delivery vehicle bodies, waste hauling vehicle bodies, and fire and emergency vehicle bodies, attachments or components to the truck bodies, buses, farm and construction equipment, truck caps and covers, commercial trailers, consumer trailers, recreational vehicles, motor homes, campers, conversion vans, vans, pleasure vehicles, pleasure craft snow mobiles, all terrain vehicles, personal watercraft, motorcycles, bicycles, boats, aircraft, cement and wood floors, walls of commercial and residential structures (e.g. office buildings and homes), amusement park equipment, ~~concrete~~ surfaces (e.g. parking lots and drive ways), asphalt and ~~concrete~~ road surface, wood substrates, marine surfaces, outdoor structures (e.g. bridges or towers), coil ~~coating~~, railroad cars, printed circuit boards, machinery, signage, fiberglass structures, sporting goods, golf balls, and sporting equipment. It is also used as clear or pigmented ~~coatings~~ in industrial and maintenance ~~coating~~ applications.

ADVANTAGE - The inventive ~~coating~~ has a short tack-free drying time at ambient temperature conditions, good metallic flake control and appearance. It is less expensive, has a reduced amount of regulated emissions, and has the ability to form a finish with excellent chip and humidity resistance and adhesion. It has unique combination of properties, e.g. excellent chip and humidity resistance and intercoat adhesion, without sacrificing desired fast dry properties at ambient temperatures and overall appearance, e.g. distinctness of image and head on brightness.

MANUAL CODE: CPI: A04-H00H; A12-B01B; G02-A02B1

TECH

POLYMERS - Preferred Composition: At least 1 (preferably 5-60) wt.% of the monomers used to form the A and A' blocks contain interactive functional groups. The lacquer ~~coating~~ composition may comprise 5-90 wt.% of a film-forming binder that contains an ABA'-block copolymer, and 95-10 wt.% of a volatile organic liquid carrier. Preferred Component: The B

block on the copolymer is a non-functional block, free of functional groups. The blocks are linearly attached to each other respectively, each is at its single terminal point. The block copolymer is made primarily from acrylic and/or preferably methacrylic monomers. The ABA' block copolymer is prepared by a macromonomer approach using cobalt as a catalytic chain transfer agent. It is tapered between AB and/or BA' block. The network-forming group is carboxylic acid groups. The lacquer includes, as part of the binder, an acrylic polymer, polyester, a highly branched copolyester polyol, alkyd resin, acrylic alkyd resin, cellulose acetate butyrate, an iminated acrylic polymer, ethylene-vinyl acetate copolymer, nitrocellulose, and/or plasticizer and a crosslinking agent. It includes metallic driers, and/or chelating agents; and a pigment and/or flake. Preferred Property: The block copolymer has a weight average molecular weight of 5000-200000. The weight average molecular weight of each block is greater than or equal to 1000. Preferred Method: The process includes applying a layer of clear coating composition over the lacquer layer. The drying takes place under ambient conditions, or at elevated temperatures.

ABEX EXAMPLE - ABA' triblock copolymer containing carboxyl groups, and primary hydroxyl groups on both the A and A' blocks, no specific functional groups on the center B block, methyl methacrylate-co-butyl methacrylate-co-2-hydroxyethyl methacrylate-co-methacrylic acid-b-butyl methacrylate-co-methyl methacrylate-b-methacrylic acid-co-hydroxyethyl methacrylate-co-ethoxytriethyleneglycol methacrylate, 32/22/7/4//15.75/10.5//5.25/1.75/1.75 wt.%, from a macromonomer was prepared. A flask was held under nitrogen positive pressure and charged with portion 1 containing macromonomer (2350. g) and ethyl acetate (960 g); portion 2 containing methyl methacrylate (MMA) (1075 g), butyl methacrylate (BMA) (740 g), 2-hydroxyethyl methacrylate (HEMA) (236 g), and methacrylic acid (135 g); portion 3 containing t-butyl peroxoate (45 g) and ethyl acetate (1066 g); portion 4 containing t-butyl peroxoate (4.6 g) and ethyl acetate (107 g); and portion 5 containing butyl acetate (283 g). After cooling, the resulting ABA' triblock copolymer solution was slightly hazy and had a solid content of 50.2% and a Gardner-Holtz viscosity of Z1. The triblock copolymer had a relatively narrow distribution of molecular weight with 28146 weight average molecular weight, 12176 number average molecular weight, and a very high glass transition temperature of 110degreesC.

L46 ANSWER 3 OF 8 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN  
 ACCESSION NUMBER: 2005-604914 [62] WPIX  
 DOC. NO. CPI: C2005-182092 [62]  
 DOC. NO. NON-CPI: N2005-496204 [62]  
 TITLE: Method of priming concrete pump line  
 for construction projects comprises preparing flowable  
 composition containing solid particulate mixture and  
 water and pumping prepared composition through  
 concrete pump line  
 DERWENT CLASS: A14; A32; A82; Q56; P64  
 INVENTOR: HURST D R; INGLESE P  
 PATENT ASSIGNEE: (PRIM-N) PRIME-A-PAC INC; (HURS-I) HURST D R; (INGL-I)  
 INGLESE P  
 COUNTRY COUNT: 106

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
WO 2005073556	A1	20050811	(200562)*	EN	17	[0]	

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KR 2005076570 A 20050726 (200643) KO  
US 20090104043 A1 20090423 (200929) EN

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2005073556	A1	WO 2005-US1980	20050119
KR 2005076570	A	KR 2004-33263	20040512
US 20090104043	A1 Provisional	US 2004-537701P	20040120
US 20090104043	A1 PCT Application	WO 2005-US1980	20050119
US 20090104043	A1	US 2006-584673	20060626

PRIORITY APPLN. INFO: KR 2004-33263 20040512  
US 2004-537701P 20040120

INT. PATENT CLASSIF.:

MAIN: B28C007-16  
IPC ORIGINAL: B28C0007-00 [I,C]; B28C0007-16 [I,A]; F04B0053-00 [I,A];  
F04B0053-00 [I,C]  
IPC RECLASSIF.: C04B0040-00 [I,A]; C04B0040-00 [I,C]; C10M0173-02 [I,A];  
C10M0173-02 [I,C]; F04B0019-00 [I,C]; F04B0019-24 [I,A]  
ECLA: C04B0040-00D4; C10M0173-02  
ICO: M10M0201:02; M10M0209:084; M10M0215:102; M10M0217:044  
USCLASS NCLM: 417/053.000  
NCLS: 524/589.000; 524/591.000

BASIC ABSTRACT:

WO 2005073556 A1 UPAB: 20051223

NOVELTY - A solid particulate mixture comprising solvatable polymeric material and urea is mixed with preset amount of water to form flowable composition. Subsequently the composition is pumped through a concrete pump line to prime it.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) method of making flowable composition for use in priming of concrete pump line;

(2) particulate mixture comprising solvatable polymeric material and urea; and

(3) flowable composition for priming of concrete pump line.

USE - For priming concrete pump line used for commercial, highway, industrial and residential construction projects.

ADVANTAGE - The fluid composition provides improved coating and lubrication to the inner walls of the concrete component. The composition is safe to handle since the composition is non-alkaline. The contact between highly alkaline material and concrete or form structures is prevented. MANUAL CODE:

CPI: A04-D04A1; A04-F01A1; A11-B05D; A12-B08

TECH

ORGANIC CHEMISTRY - Preferred Composition: The mixture further contains citric acid as buffering agent.

POLYMERS - Preferred Composition: The particulate mixture contains solvatable polymeric material (2-50 wt.%, preferably 10-20 wt.%) and urea (50-98 wt.%, preferably 80-90 wt.%). The ratio of mixture to water in the flowable composition was 0.1-1 pound, preferably 0.05-0.2 pound of mixture per gallon of water.

Preferred Material: The polymeric material is polyacrylamide, polyacrylate and/or copolymer of polyacrylamide and polyacrylate. The polymeric material contains polyacrylamide (more than 80 wt.%) and copolymer of polyacrylamide and polyacrylate (less than 20 wt.%).



# 10/584673

ACCESSION NUMBER: 2004-454134 [43] WPIX  
 DOC. NO. CPI: C2004-170512 [43]  
 TITLE: Antimicrobial, antimold, antialgae and antifouling  
 composition for coating  
 concrete, mortar, treatment facility of seawater  
 and outer wall of building, contains polyhexamethylene  
 guanidine phosphate as active ingredient  
 DERWENT CLASS: A97; C01; D22; E11; G02  
 INVENTOR: CHE K S; KIM J M; TSURUTOME T  
 PATENT ASSIGNEE: (DAIW-C) DAIWA KAGAKU KOGYO KK; (RIVA-N) RIVARSON KK;  
 (SKCH-N) SK CHEM CO LTD  
 COUNTRY COUNT: 1

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
JP 2004149496	A	20040527	(200443)*	JA	10[0]	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2004149496	A	JP 2002-319537	20021101

PRIORITY APPLN. INFO: JP 2002-319537 20021101

## INT. PATENT CLASSIF.:

IPC RECLASSIF.: A01N0025-10 [I,A]; A01N0025-10 [I,C]; A01N0043-34 [I,C];  
 A01N0043-40 [I,A]; A01N0043-64 [I,C]; A01N0043-70 [I,A];  
 A01N0047-28 [I,C]; A01N0047-30 [I,A]; A01N0047-40 [I,C];  
 A01N0047-44 [I,A]; A01N0059-16 [I,A]; A01N0059-16 [I,C];  
 A01N0059-20 [I,A]

## JAP. PATENT CLASSIF.:

MAIN/SEC.: A01N0025-10; A01N0043-40 101 L; A01N0043-70; A01N0047-30  
 B; A01N0047-44; A01N0059-16 Z; A01N0059-20 Z

## FTERM CLASSIF.:

4H011; 4H011/AA02; 4H011/AD01; 4H011/BA01; 4H011/BB09;  
 4H011/BB11; 4H011/BB14; 4H011/BB18; 4H011/BC19;  
 4H011/DA01; 4H011/DC05; 4H011/DD07; 4H011/DH16

## BASIC ABSTRACT:

JP 2004149496 A UPAB: 20050706

NOVELTY - An antimicrobial, antimold, antialgae and antifouling  
 composition contains polyhexamethylene guanidine phosphate as an active  
 ingredient.

ACTIVITY - Antimicrobial; Fungicide; Antialgal; Antifouling.

MECHANISM OF ACTION - None given.

USE - For coating concrete, mortar (claimed), treatment facility of  
 seawater, outer wall of building, embankment block, warm water drainage-gutter  
 vicinity of power station, cooling driving channel, culture water tank, iron  
 pipeline of water and sewer services, flush tank and fresh water to prevent  
 adhesion of bacteria, fungi, algae and crustaceans.

ADVANTAGE - The antimicrobial, antimold, antialgae and antifouling  
 composition has excellent antimicrobial property, algae resistance and mildew proof  
 capability. The composition provides stain resistance for a long period of time.

## MANUAL CODE:

CPI: A08-M02; A12-B08; C04-C03D; C07-D04A; C07-D13;  
 C10-A13D; C14-A01; C14-A04; C14-A05; C14-B15; C14-W;  
 D09-A; D09-A01; E07-D04A; E07-D13B; E10-A13B2; G02-A05G

## TECH

ORGANIC CHEMISTRY - Preferred Components: The antimicrobial, antimold,  
 antialgae and antifouling composition further contains  
 3-(3,4-dichlorophenyl)-1,1-dimethyl urea,

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2-methylthio-4,6-bis(isopropyl amino)-s-triazine, zinc-2-pyridyl thio-1-oxide, kappa-(2-pyridylthio-1-oxide) and organic acid salts of guanidine-type compound as active ingredients. It further contains mineral salt of hydrochloride, sulfate, nitrate, carboxylic acid and/or synthetic resins such as fluororesin, epoxy resin, polyester resin, urethane resin, vinyl chloride resin, polyvinyl acetate resin, phthalic resin, alkyd resin, phenol resin, melanin resin, acrylic resin and resin having water repellent and durability (natural resin). The antimicrobial, antimold, antialgae and antifouling composition is dispersed in polar or non-polar solvent.

L46 ANSWER 5 OF 8 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN  
 ACCESSION NUMBER: 2004-423171 [40] WPIX  
 DOC. NO. CPI: C2004-159122 [40]  
 DOC. NO. NON-CPI: N2004-335699 [40]  
 TITLE: Indoor deodorization, involves pasting adhesive of super growth energy fine powder on interior material, dispersing water molecule on fine powder and wrapping odor component particles on interior material with water molecule  
 DERWENT CLASS: A93; D22; G02; G03; Q43  
 INVENTOR: AKAMATSU K  
 PATENT ASSIGNEE: (NEOP-N) NEO PLANNING YG  
 COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
JP 2004100412	A	20040402	(200440)*	JA	10[5]	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2004100412	A	JP 2002-299595	20020905

PRIORITY APPLN. INFO: JP 2002-299595 20020905

INT. PATENT CLASSIF.:

IPC RECLASSIF.: C09D0133-00 [I,A]; C09D0133-00 [I,C]; C09D0163-00 [I,A]; C09D0163-00 [I,C]; C09D0005-00 [I,A]; C09D0005-00 [I,C]; C09J0011-02 [I,C]; C09J0011-04 [I,A]; C09J0201-00 [I,A]; C09J0201-00 [I,C]; D06M0011-00 [I,A]; D06M0011-00 [I,C]; D06M0011-77 [I,A]; D06M0015-21 [I,C]; D06M0015-333 [I,A]; D06M0015-37 [I,C]; D06M0015-564 [I,A]; D06M0023-08 [I,A]; D06M0023-08 [I,C]; D06N0007-00 [I,A]; D06N0007-00 [I,C]; E04B0001-64 [I,A]; E04B0001-64 [I,C]; E04B0001-70 [I,A]; E04B0001-70 [I,C]

JAP. PATENT CLASSIF.:

MAIN/SEC.: C09D0133-00; C09D0163-00; C09D0005-00 Z; C09J0011-04; C09J0201-00; D06M0011-06; D06M0011-77; D06M0015-333; D06M0015-564; D06M0023-08; D06N0007-00; E04B0001-64 D; E04B0001-70 Z

FTERM CLASSIF.:

2E001; 4F055; 4J038; 4J040; 4L031; 4L033; 4J040/AA01.1; 4L031/AA01; 4L033/AA01; 4L033/AA04; 4L031/AA11; 4F055/AA13; 4F055/AA15; 4F055/AA17; 4L033/AB04; 4L031/AB31; 4L033/AC15; 4J040/BA10.1; 4L031/BA19; 4L031/BA23; 4L033/CA06; 4F055/CA13; 4F055/CA18; 4L033/CA28; 4L033/CA34; 4L033/CA50; 4J038/CG00.1; 4L031/DA13; 4J038/DB00.1; 4J040/DD02.1; 4J040/DE02.1;

10/584673

2E001/DH21; 4J040/EB03.1; 2E001/FA10; 2E001/FA11;  
2E001/GA03; 2E001/GA06; 2E001/GA12; 2E001/GA24;  
2E001/HA10; 4F055/HA18; 2E001/HA20; 4J040/HA31.1;  
4J040/HA35.6; 4J038/HA50.6; 2E001/JA01; 4J040/JA03;  
2E001/JD02; 2E001/KA04; 4J038/KA08; 4J040/KA42;  
2E001/LA04; 4J040/LA11; 2E001/LA16; 4J038/MA08;  
4J038/MA10; 4J040/NA05; 4J038/NA27; 4J038/PB02;  
4J038/PB05; 4J038/PC03; 4J038/PC06; 4J038/PC10

BASIC ABSTRACT:

JP 2004100412 A UPAB: 20050530

NOVELTY - An interior material is pasted on indoor substrate using an adhesive agent of aqueous-based adhesive mixed with fine powder of super growth energy (SGE) to form deodorant adhesive layer. Water molecules (10) in air are dispersed on the SGE fine powder. Microparticles of odor component (11) which exists on the interior material are wrapped in finely dispersed sub-micron sized water molecule (101), and the room is deodorized.

DETAILED DESCRIPTION - An interior material is pasted on an indoor substrate using a deodorant adhesive agent to form a deodorant adhesive layer on the reverse side of the interior material. The adhesive agent contains aqueous-based adhesive mixed with fine powder of super growth energy (SGE) having deodorization property. Water molecules (10) in air are dispersed finely on the periphery of the SGE fine powder. Microparticles of odor component, which exists on the surface of the interior material, are wrapped in the finely dispersed sub-micron sized water molecule (101), and the room is deodorized.

INDEPENDENT CLAIMS are included for the following:

- (1) deodorant adhesive agent; and
- (2) coating agent used for deodorizing floors.

USE - For deodorizing indoor materials such as wallpaper, cloth, wallboard material, flooring materials such as tile, sheet or plate material, and wooden flooring (claimed) in restaurants and residences.

ADVANTAGE - The indoor wall surface is deodorized easily by the deodorization method.

DESCRIPTION OF DRAWINGS - The figure shows diagrammatic representation of the deodorization property of the fine powder of super growth energy. (Drawing includes non-English language text).

water molecule (10)

odor component (11)

sub-micron sized water molecule (101) MANUAL CODE:

CPI: A11-

B05D; A12-R03; A12-R07; D09-B; G02-A05F; G03-B02

TECH

POLYMERS - Preferred Adhesive: The adhesive agent is starch paste, vinyl acetate emulsion group adhesive, urea group adhesive, phenol group adhesive, polyvinyl alcohol group adhesive or sodium silicate group adhesive. The fine powder of super growth energy is mixed in the aqueous-based adhesive agent in a volume ratio of 6:4 or 9:1. Preferred Coating Agent: Especially, solventless epoxy resin-based coating agent, aqueous-based acrylic resin group coating agent or aqueous-based epoxy resin-based coating agent is used for floors.

INORGANIC CHEMISTRY - Preferred Process: Alternately, mortar, fine powder of super growth energy and water are mixed to form deodorant mortar. The mortar is applied on indoor wall surface to form deodorant mortar layer. Alternately, concrete which mixed sand and cement, fine powder of super growth energy and water are mixed to form deodorant concrete. The concrete is applied on the indoor wall surface to form a deodorant concrete layer.

L46 ANSWER 6 OF 8 WPIX COPYRIGHT 2009

THOMSON REUTERS on STN

ACCESSION NUMBER: 2003-721578 [68] WPIX

# 10/584673

DOC. NO. CPI: C2003-198472 [68]  
 TITLE: Chain extended dendritic polyether used in preparation of e.g. air drying alkyd resin, polyurethane coating /adhesive, and saturated polyester, comprises dendritic core polymer and chain extension bonded to core polymer  
 DERWENT CLASS: A14; A17; A28; A81; A82; A93; G02; G03; L02  
 INVENTOR: BJOERNBERG H; BJORNBERG H; HAEGGMAN B; HAGGMAN B; JAMES D; MIDELF B; PETTERSSON B; BIRGER M; BO H; DAVID J; HAKAN B  
 PATENT ASSIGNEE: (PEST-C) PERSTORP SPECIALTY CHEM AB  
 COUNTRY COUNT: 101

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2003062306	A1	20030731	(200368)*	EN	28	[0]
SE 2002000207	A	20030726	(200368)	SV		
AU 2003237227	A1	20030902	(200422)	EN		
SE 524461	C2	20040810	(200454)	SV		
EP 1468040	A1	20041020	(200469)	EN		
JP 2005515283	W	20050526	(200535)	JA	30	
US 20050131205	A1	20050616	(200540)	EN		
CN 1622968	A	20050601	(200560)	ZH		
US 7091308	B2	20060815	(200654)	EN		
CN 1279089	C	20061011	(200716)	ZH		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2003062306	A1	WO 2003-SE117	20030122
SE 2002000207	A	SE 2002-207	20020125
SE 524461	C2	SE 2002-207	20020125
AU 2003237227	A1	AU 2003-237227	20030122
CN 1622968	A	CN 2003-802699	20030122
EP 1468040	A1	EP 2003-731877	20030122
JP 2005515283	W	JP 2003-562180	20030122
EP 1468040	A1	WO 2003-SE117	20030122
JP 2005515283	W	WO 2003-SE117	20030122
US 20050131205	A1	WO 2003-SE117	20030122
US 7091308	B2	WO 2003-SE117	20030122
US 20050131205	A1	US 2004-501024	20040914
US 7091308	B2	US 2004-501024	20040914
CN 1279089	C	CN 2003-802699	20030122

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2003237227	A1	WO 2003062306
EP 1468040	A1	WO 2003062306
JP 2005515283	W	WO 2003062306
US 7091308	B2	WO 2003062306

PRIORITY APPLN. INFO: SE 2002-207 20020125

## INT. PATENT CLASSIF.:

MAIN: C08G065-28; C08G083-00  
 IPC ORIGINAL: C08G0059-00 [I,C]; C08G0059-06 [I,A]; C08G0065-00 [I,C];

C08G0065-14 [I,A]; C08G0065-18 [I,A]; C08G0083-00 [I,A];  
C08G0083-00 [I,C]  
IPC RECLASSIF.: C08G0065-00 [I,C]; C08G0065-18 [I,A]; C08G0065-26 [I,A];  
C08G0065-28 [I,A]; C08G0083-00 [I,A]; C08G0083-00 [I,C];  
C09D0011-10 [I,A]; C09D0011-10 [I,C]; C09D0171-00 [I,A];  
C09D0171-00 [I,C]; C09J0171-00 [I,A]; C09J0171-00 [I,C]  
ECLA: C08G0065-26C1L; C08G0083-00D  
USCLASS NCLM: 528/417.000  
NCLS: 528/425.000  
JAP. PATENT CLASSIF.:  
MAIN/SEC.: C08G0065-18; C08G0065-28; C09D0011-10; C09D0171-00;  
C09J0171-00  
FTerm CLASSIF.: 4J005; 4J038; 4J039; 4J040; 4J005/AA21; 4J039/AE07;  
4J005/BB01; 4J038/DF01.1; 4J038/DF02.1; 4J038/DF05.1;  
4J040/EE01.1; 4J040/EE02.1

## BASIC ABSTRACT:

WO 2003062306 A1 UPAB: 20060120

NOVELTY - A chain extended dendritic polyether has dendritic core polymer and chain extension bonded to core polymer. The core polymer is polyhydric dendritic polyether and the chain extension is obtained by addition of alkylene oxide to hydroxy group in the core polymer at molar ratio of 1:1 - 1:100, preferably 1:2 - 1:50.

USE - The invention is used in preparation of air drying alkyd resin; polyurethane coating/adhesive; saturated/unsaturated polyester; toughening agent for thermosetting resins such as epoxy resins, unsaturated polyesters, vinyl esters, polyurethanes, maleimides, cyanate esters, phenolics urea-formaldehyde resins and melamine-formaldehyde resins, and/or their composites; pigment dispersion agent for solvent-free, solvent borne, and waterborne coatings; water dispersant resin for alkyd emulsions, acrylic dispersions, and polyurethane dispersions; dispersing polymer or resin such as reactive polymeric surfactant for non-amphiphilic alkyds, polyesters, polyethers, and polyurethanes; processing aid for polyolefins and thermoplastics such as polycarbonates, polyamides, polyester, polyimides, and polyurethanes; concrete mixture imparting fluidity to hydraulic compositions such as cement pastes, mortars, or concretes; and/or radiation curing coating, printing ink, or adhesive (claimed).

ADVANTAGE - The chain extended dendritic polyether has exceptionally low viscosity with regard to molecular weight. Inherent flexibility in the backbone promote good flexibility and adhesion. The high end group functionality provides excellent film hardness and modulus retention to coatings.

MANUAL CODE: CPI: A10-E01; A12-A05; A12-B01; A12-R01; G02-A02B2;  
G02-A02E; G02-A02H; G03-B02E; G03-B02E3; G03-B02E4;  
L02-D14E; L02-D14F

## TECH

ORGANIC CHEMISTRY - Preferred Compounds: The alkylene oxide is ethylene oxide; propylene oxide; 1,3-butylene oxide; 2,4-butylene oxide; cyclohexene oxide; butadiene monoxide; phenylethylene oxide; or their mixtures. The oxetane is 3-alkyl-3-(hydroxyalkyl)oxetane; 3,3-di(hydroxyalkyl)oxetane; 3-alkyl-3-(hydroxyalkoxy)oxetane; 3-alkyl-3-(hydroxyalkoxyalkyl)oxetane; or their dimer, trimer, or polymer, preferably 3-methyl-3(hydroxymethyl)oxetane; 3-ethyl-3-(hydroxymethyl)oxetane; and/or 3,3-di(hydroxymethyl)oxetane. It is an oxetane of trimethylolethane, trimethylolpropane, pentaerythritol, ditrimethylolethane, ditrimethylolpropane, or dipentaerythritol. The dendritic polyether is partially chain terminated by addition to the chain extension and/or core polymer of aliphatic or aromatic saturated/unsaturated carboxylic acid or corresponding anhydride or halide, aliphatic or aromatic mono or diisocyanate, epoxidized saturated or unsaturated alcohol, allyl or vinyl ether, thiol, glycidyl ether, sulfonate, or phosphate. It is partially functionalized by reaction with

allyl halide such as allyl bromide and/or allyl chloride, and/or epihalohydrin such as epichlorohydrin and/or epibromohydrin. It is partially chain terminated by addition to the chain extension and/or core polymer of acrylic acid, methacrylic acid, crotonic acid, isocrotonic acid, or to their corresponding anhydride or halide, preferably propionic acid; butyric acid; valeric acid; isobutyric acid; trimethylacetic acid; nonanoic acid; isononanoic acid; 2-ethyl-hexanoic acid; caproic acid; caprylic acid; capric acid; heptanoic acid; benzoic acid; para-tert. butylbenzoic acid; pelargonic acid; lauric acid; myristic acid; palmitic acid; stearic acid; isostearic acid; behenic acid; lignoceric acid; cerotic acid; montanoic acid; abietic acid; sorbinic acid; oleic acid; ricinoleic acid; linoleic acid; linolenic acid; erucic acid; sorbinic acid; ricinoleic acid; soybean fatty acid; linseed fatty acid; dehydrated castor fatty acid; tall oil fatty acid; tung oil fatty acid; sunflower fatty acid; safflower fatty acid; o-phthalic acid; isophthalic acid; terephthalic acid; azeleic acid; adipic acid; and/or trimellitic acid; or to their corresponding anhydride.

POLYMERS - Preferred Compounds: The polyhydric dendritic polyether is obtained by ring addition of oxetane to di, tri, or polyhydric core molecule at molar ratio yielding polyhydric dendritic polyether comprising core molecule and branching generation bonded to hydroxyl group. The polyhydric core molecule is 1,omega-diol; 5-hydroxy-1,3-dioxane; 5-hydroxyalkyl-1,3-dioxane; 5-alkyl-5-hydroxyalkyl-1,3-dioxane; 5,5-di(hydroxyalkyl)-1,3-dioxane; 2-alkyl-1,3-propanediol; 2,2-dialkyl-1,3-propanediol; 2-hydroxy-1,3-propanediol; 2-hydroxy-2-alkyl-1,3-propanediol; 2-hydroxyalkyl-2-alkyl-1,3-propanediol; 2,2-di(hydroxyalkyl)-1,3-propanediol; or its dimer, trimer, or polymer, preferably 1,4-butanediol; 1,5-pentanediol; 1,6-hexanediol; 1,6-cyclohexanedimethanol; 5,5-dihydroxymethyl-1,3-dioxane; 2-methyl-1,3-propanediol; 2-methyl-2-ethyl-1,3-propanediol; 2-ethyl-2-butyl-1,3-propanediol; neopentyl glycol; dimethylolpropane; 1,1-dimethylolcyclohexane; glycerol; trimethylolpropane; trimethylolpropane; diglycerol; ditrimethylolpropane; ditrimethylolpropane; pentaerythritol; dipentaerythritol; anhydroenneaheptitol; sorbitol; or mannitol.

L46 ANSWER 7 OF 8 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN  
 ACCESSION NUMBER: 1998-375759 [32] WPIX  
 DOC. NO. CPI: C1998-113966 [32]  
 TITLE: Decorative and protective coating  
 composition used on concrete, brick and  
 wood - is water based and contains modified latex of  
 butadiene-styrene copolymer  
 DERWENT CLASS: A12; A82; G02; L02  
 INVENTOR: AFANASEVA L N; KORMER N V  
 PATENT ASSIGNEE: (LEBE-R) LEBEDEV SYNTH RUBBER RES INST  
 COUNTRY COUNT: 1

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
RU 2099375	C1	19971220	(199832)*	RU	7[0]	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
RU 2099375	C1	RU 1995-111865	19950711

10/584673

PRIORITY APPLN. INFO: RU 1995-111865 19950711  
INT. PATENT CLASSIF.:  
IPC RECLASSIF.: C09D0109-00 [I,C]; C09D0109-08 [I,A]; C09D0005-02 [I,A];  
C09D0005-02 [I,C]

BASIC ABSTRACT:

RU 2099375 C1 UPAB: 20050521

This decorative and protective ~~coating~~ composition which may be used on ~~concrete~~, brick and wood surfaces for the external facades and internal walls of buildings, contains a latex of a butadiene-styrene copolymer, a thickening agent, a mineral filler having 0.01-0.3 mm and 0.31-3.0 mm particle size fractions and H<sub>2</sub>O. The novelty of the composition is that the latex may be modified with an alkylated phenol or an alkylated alkylphenol or the phosphorous (P) containing derivatives of these, such that the rigidity of the said latex may be 40-65 N (based on the dry substance), and the composition may also contain ~~carbamide~~. Under these conditions, the composition may contain (pts. weight) the latex 100, the thickening agent 3.5-3.0 mm particle size fraction 80-125, the mineral filler having the 0.31-3.0 mm particle size fraction 150-250, the ~~carbamide~~ 0.4-12.3 and H<sub>2</sub>O.

USE - As a decorative and protective ~~coating~~ composition for use on ~~concrete~~, brick and wood surfaces.

ADVANTAGE - The composition has an increased storage period, and an improved resistance to high humidity and temperatures up to 50 deg.C. MANUAL CODE:  
CPI: A04-B03; A08-M06; A08-R01; A12-B01G; G02-A02D1;  
G02-A02D4; L02-D14P

L46 ANSWER 8 OF 8 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN

ACCESSION NUMBER: 1997-258979 [23] WPIX

DOC. NO. CPI: C1997-083698 [23]

TITLE: Water-redispersible powdered compositions based on water-insoluble film forming polymers - with at least one principal surfactant with a binary water-surfactant phase diagram and a water soluble compound

DERWENT CLASS: A18; A25; A81; A82; A93; G02; G03; L02

INVENTOR: GUERIN G; MORVAN M

PATENT ASSIGNEE: (RHOD-C) RHODIA CHIM; (RHON-C) RHONE POULENC CHIM;  
(RHON-C) RHONE-POULENC CHIM

COUNTRY COUNT: 61

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 9715617	A1	19970501	(199723)*	FR	24	[0]
FR 2740461	A1	19970430	(199725)	FR	20	[0]
AU 9673068	A	19970515	(199736)	EN		
NO 9801833	A	19980624	(199835)	NO		
EP 857190	A1	19980812	(199836)	FR		
CZ 9801235	A3	19980916	(199843)	CS		
SK 9800522	A3	19980909	(199848)	SK		
JP 11500178	W	19990106	(199911)	JA	24	
CN 1200747	A	19981202	(199916)	ZH		
BR 9611249	A	19990504	(199924)	PT		
HU 9900332	A2	19990528	(199930)	HU		
JP 2989273	B2	19991213	(200004)	JA	9	
MX 9803135	A1	19981101	(200022)	ES		
AU 718444	B	20000413	(200028)	EN		
NZ 320342	A	19991129	(200031)	EN		
KR 99067054	A	19990816	(200045)	KO	[0]	
TW 448187	A	20010801	(200222)	ZH		
US 6369153	B1	20020409	(200227)	EN		

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CN 1074432 C 20011107 (200510) ZH

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9715617 A1		WO 1996-FR1639	19961021
FR 2740461 A1		FR 1995-12588	19951025
TW 448187 A		TW 1996-112825	19961019
AU 9673068 A		AU 1996-73068	19961021
AU 718444 B		AU 1996-73068	19961021
BR 9611249 A		BR 1996-11249	19961021
CN 1200747 A		CN 1996-197863	19961021
CN 1074432 C		CN 1996-197863	19961021
EP 857190 A1		EP 1996-934942	19961021
NZ 320342 A		NZ 1996-320342	19961021
NO 9801833 A		WO 1996-FR1639	19961021
EP 857190 A1		WO 1996-FR1639	19961021
CZ 9801235 A3		WO 1996-FR1639	19961021
SK 9800522 A3		WO 1996-FR1639	19961021
JP 11500178 W		WO 1996-FR1639	19961021
BR 9611249 A		WO 1996-FR1639	19961021
HU 9900332 A2		WO 1996-FR1639	19961021
JP 2989273 B2		WO 1996-FR1639	19961021
NZ 320342 A		WO 1996-FR1639	19961021
KR 99067054 A		WO 1996-FR1639	19961021
US 6369153 B1 Cont of		WO 1996-FR1639	19961021
JP 11500178 W		JP 1997-516350	19961021
JP 2989273 B2		JP 1997-516350	19961021
CZ 9801235 A3		CZ 1998-1235	19961021
SK 9800522 A3		SK 1998-522	19961021
MX 9803135 A1		MX 1998-3135	19980422
NO 9801833 A		NO 1998-1833	19980423
KR 99067054 A		KR 1998-702992	19980424
US 6369153 B1 Cont of		US 1998-51737	19980724
HU 9900332 A2		HU 1999-332	19961021
US 6369153 B1		US 2000-631333	20000803

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 718444 B	Previous Publ	AU 9673068 A
JP 2989273 B2	Previous Publ	JP 11500178 W
AU 9673068 A	Based on	WO 9715617 A
EP 857190 A1	Based on	WO 9715617 A
CZ 9801235 A3	Based on	WO 9715617 A
JP 11500178 W	Based on	WO 9715617 A
BR 9611249 A	Based on	WO 9715617 A
HU 9900332 A2	Based on	WO 9715617 A
JP 2989273 B2	Based on	WO 9715617 A
AU 718444 B	Based on	WO 9715617 A
KR 99067054 A	Based on	WO 9715617 A

PRIORITY APPLN. INFO: FR 1995-12588 19951025  
 WO 1996-FR1639 19961021

## INT. PATENT CLASSIF.:

MAIN: C08F002-00; C08K005-098; C08L101-00  
 IPC RECLASSIF.: C04B0024-00 [I,C]; C04B0024-26 [I,A]; C04B0024-38 [I,A];  
 C04B0040-00 [I,A]; C04B0040-00 [I,C]; C08J0003-02 [I,C];



# 10/584673

C08J0003-05 [I,A]; C08J0003-12 [I,A]; C08J0003-12 [I,C];  
 C08K0005-00 [I,C]; C08K0005-09 [I,A]; C08K0005-17 [I,A];  
 C08L0101-00 [I,A]; C08L0101-00 [I,C]; C08L0025-00 [I,C];  
 C08L0025-10 [I,A]; C08L0025-14 [I,A]; C08L0031-00 [I,C];  
 C08L0031-04 [I,A]; C08L0033-00 [I,C]; C08L0033-04 [I,A];  
 C08L0009-00 [I,C]; C08L0009-06 [I,A]; C09D0109-00 [I,C];  
 C09D0109-06 [I,A]; C09D0125-00 [I,C]; C09D0125-10 [I,A];  
 C09D0125-14 [I,A]; C09D0133-04 [I,A]; C09D0133-04 [I,C];  
 C09J0109-00 [I,C]; C09J0109-06 [I,A]; C09J0125-00 [I,C];  
 C09J0125-10 [I,A]; C09J0125-14 [I,A]; C09J0133-04 [I,A];  
 C09J0133-04 [I,C]; D21H0019-00 [I,C]; D21H0019-36 [I,A];  
 D21H0019-38 [I,A]  
 ECLA: C04B0024-26K; C04B0040-00D4; C08J0003-05  
 USCLASS NCLM: 524/523.000  
 NCLS: 523/334.000; 524/524.000; 524/563.000  
 JAP. PATENT CLASSIF.:  
 MAIN/SEC.: C04B0024-26 A; C04B0024-26 G; C04B0024-38 Z; C08J0003-12  
 101; C08K0005-09; C08K0005-17; C08L0101-00; C08L0025-10;  
 C08L0025-14; C08L0031-04 Z; C08L0033-04; C08L0009-06;  
 C09D0109-06; C09D0125-10; C09D0125-14; C09D0133-04;  
 C09J0109-06; C09J0125-10; C09J0125-14; C09J0133-04;  
 D21H0001-22 B; D21H0001-22 Z; D21H0019-36 Z; D21H0019-38  
 FTERM CLASSIF.: 4F070; 4G012; 4J002; 4J038; 4J040; 4L055; 4F070/AA08;  
 4F070/AA18; 4F070/AA28; 4F070/AA32; 4J002/AB05.2;  
 4F070/AC12; 4F070/AC19; 4F070/AC20; 4F070/AC22;  
 4F070/AC27; 4F070/AC36; 4F070/AC40; 4F070/AC46;  
 4F070/AC47; 4F070/AC83; 4F070/AD04; 4F070/AE01;  
 4F070/AE14; 4F070/AE28; 4F070/AE30; 4L055/AG33;  
 4L055/AG35; 4L055/AG38; 4L055/AG62; 4L055/AG64;  
 4L055/AG71; 4L055/AG76; 4L055/AG89; 4L055/AG96;  
 4L055/AH02; 4J038/BA00.2; 4J038/BA01.2; 4J040/BA10.2;  
 4J002/BC05.1; 4J002/BC07.1; 4J002/BF02.1; 4J002/BG04.1;  
 4J002/BN15.1; 4J038/CA04.1; 4J038/CA06.1; 4J040/CA06.1;  
 4J040/CA08.1; 4J038/CC04.1; 4J038/CC06.1; 4J038/CF02.1;  
 4J038/CG03.2; 4J038/CG06.2; 4J038/CG07.2; 4J038/CG14.1;  
 4J038/CH03.1; 4J038/CH04.1; 4J038/CJ03.1; 4J040/DA02.2;  
 4F070/DA33; 4F070/DA34; 4J040/DB05.1; 4J040/DB06.1;  
 4F070/DC12; 4F070/DC13; 4J040/DE02.1; 4J040/DF04.1;  
 4J002/DH04.7; 4J002/DJ00.7; 4J038/DJ01.2; 4L055/EA16;  
 4L055/EA20; 4L055/EA25; 4L055/EA29; 4L055/EA31;  
 4L055/EA32; 4J002/EF01.6; 4J002/ET00.7; 4L055/FA22;  
 4L055/FA23; 4J002/FD31.2; 4J002/FD31.6; 4J040/GA07;  
 4J002/GJ01; 4J002/GJ02; 4J002/GK04; 4J040/HA14.6;  
 4J040/HA15.6; 4J038/HA21.6; 4J038/HA28.6; 4J038/HA35.6;  
 4J038/HA37.6; 4J038/HA41.6; 4J038/HA45.6; 4J038/HA53.6;  
 4J038/HA55.6; 4J040/HB26; 4J040/HC16; 4J040/HC19;  
 4J040/JA03; 4J040/JA07; 4J038/JA37; 4J040/JB09;  
 4J038/JB10; 4J038/JB13; 4J038/JB24; 4J038/KA01;  
 4J040/KA03; 4J038/KA07; 4J038/KA08; 4J038/KA09;  
 4J038/KA18; 4J038/KA20; 4J040/KA38; 4J040/KA42;  
 4J040/LA02; 4J038/LA03; 4J038/LA06; 4J038/LA07;  
 4J038/MA00; 4J038/MA02; 4J040/MA06; 4J038/MA08;  
 4J038/MA12; 4J038/NA26; 4J038/PC10; 4J040/QA03;  
 4J040/QA09

## BASIC ABSTRACT:

WO 1997015617 A1 UPAB: 20060113

Water-redispersible powdered compositions are obtained by mixing and then drying (a) an emulsion of at least one water-insoluble film-forming polymer prepared from at least one ethylenically unsaturated monomer, (b) at least one principal surfactant having a binary water-surfactant phase diagram

comprising an isotropic phase that is fluid at 25 °C up to a surfactant concentration of at least 50 weight %, followed by a hexagonal or cubic rigid liquid crystal phase at higher concentrations, the said liquid crystal phase being stable at least up to the drying temperature, and (c) at least one water-soluble compound.

USE - The powder products can be redispersed in water to form a pseudo-latex which can be used in the formulation of coating compositions such as paints and paper coatings or adhesives, or the powders can be incorporated into hydraulic binders e.g. mortars and concretes to give compositions which can be used as construction materials, as adhesive mortars or for formulating protective or decorative coatings for the interior and exterior of buildings.

ADVANTAGE - The powdered products are stable upon storage without agglomeration. When used as additives to hydraulic binders, the dry powders can be pre-mixed with the cement to give ready-to-use mixes for the production of mortars and concretes which after hardening have improved adhesion to other substrates, improved sealing properties, better flexibility and improved mechanical properties.

MANUAL CODE: CPI: A12-A05; A12-B01A; G02-A02C; G02-A02D; G03-B02D;  
L02-D14F

Member (0002)

ABEQ FR 2740461 A1 UPAB 20060113

Water-redispersible powdered compositions are obtained by mixing and then drying (a) an emulsion of at least one water-insoluble film-forming polymer prepared from at least one ethylenically unsaturated monomer, (b) at least one principal surfactant having a binary water-surfactant phase diagram comprising an isotropic phase that is fluid at 25 °C up to a surfactant concentration of at least 50 wt. %, followed by a hexagonal or cubic rigid liquid crystal phase at higher concentrations, the said liquid crystal phase being stable at least up to the drying temperature, and (c) at least one water-soluble compound.

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ADVANTAGE - The powdered products are stable upon storage without agglomeration. When used as additives to hydraulic binders, the dry powders can be pre-mixed with the cement to give ready-to-use mixes for the production of mortars and concretes which after hardening have improved adhesion to other substrates, improved sealing properties, better flexibility and improved mechanical properties.

Member (0005)

ABEQ EP 857190 A1 UPAB 20060113

Water-redispersible powdered compositions are obtained by mixing and then drying (a) an emulsion of at least one water-insoluble film-forming polymer prepared from at least one ethylenically unsaturated monomer, (b) at least one principal surfactant having a binary water-surfactant phase diagram comprising an isotropic phase that is fluid at 25 °C up to a surfactant concentration of at least 50 wt. %, followed by a hexagonal or cubic rigid liquid crystal phase at higher concentrations, the said liquid crystal phase being stable at least up to the drying temperature, and (c) at least one water-soluble compound.

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concretes to give compositions which can be used as construction materials, as adhesive mortars or for formulating protective or decorative coatings for the interior and exterior of buildings.

ADVANTAGE - The powdered products are stable upon storage without agglomeration. When used as additives to hydraulic binders, the dry powders can be pre-mixed with the cement to give ready-to- use mixes for the production of mortars and concretes which after hardening have improved adhesion to other substrates, improved sealing properties, better flexibility and improved mechanical properties.

Member(0008)

ABEQ JP 11500178 W UPAB 20060113

Water-redispersible powdered compositions are obtained by mixing and then drying (a) an emulsion of at least one water-insoluble film-forming polymer prepared from at least one ethylenically unsaturated monomer, (b) at least one principal surfactant having a binary water-surfactant phase diagram comprising an isotropic phase that is fluid at 25 °C up to a surfactant concentration of at least 50 wt. %, followed by a hexagonal or cubic rigid liquid crystal phase at higher concentrations, the said liquid crystal phase being stable at least up to the drying temperature, and (c) at least one water-soluble compound.

USE - The powder products can be redispersed in water to form a pseudo-latex which can be used in the formulation of coating compositions such as paints and paper coatings or adhesives, or the powders can be incorporated into hydraulic binders e.g. mortars and concretes to give compositions which can be used as construction materials, as adhesive mortars or for formulating protective or decorative coatings for the interior and exterior of buildings.

ADVANTAGE - The powdered products are stable upon storage without agglomeration. When used as additives to hydraulic binders, the dry powders can be pre-mixed with the cement to give ready-to- use mixes for the production of mortars and concretes which after hardening have improved adhesion to other substrates, improved sealing properties, better flexibility and improved mechanical properties.

Member(0012)

ABEQ JP 2989273 B2 UPAB 20060113

Water-redispersible powdered compositions are obtained by mixing and then drying (a) an emulsion of at least one water-insoluble film-forming polymer prepared from at least one ethylenically unsaturated monomer, (b) at least one principal surfactant having a binary water-surfactant phase diagram comprising an isotropic phase that is fluid at 25 °C up to a surfactant concentration of at least 50 wt. %, followed by a hexagonal or cubic rigid liquid crystal phase at higher concentrations, the said liquid crystal phase being stable at least up to the drying temperature, and (c) at least one water-soluble compound.

USE - The powder products can be redispersed in water to form a pseudo-latex which can be used in the formulation of coating compositions such as paints and paper coatings or adhesives, or the powders can be incorporated into hydraulic binders e.g. mortars and concretes to give compositions which can be used as construction materials, as adhesive mortars or for formulating protective or decorative coatings for the interior and exterior of buildings.

ADVANTAGE - The powdered products are stable upon storage without agglomeration. When used as additives to hydraulic binders, the dry powders can be pre-mixed with the cement to give ready-to- use mixes for the production of mortars and concretes

# 10/584673

which after hardening have improved adhesion to other substrates, improved sealing properties, better flexibility and improved mechanical properties.

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(FILE 'HCAPLUS' ENTERED AT 11:05:47 ON 20 NOV 2009)

L52 12 S L28 NOT L51

FILE 'WPIX' ENTERED AT 11:07:22 ON 20 NOV 2009

FILE 'HCAPLUS' ENTERED AT 11:07:26 ON 20 NOV 2009

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L4      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  9003-01-4/RN
L5      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  25087-26-7/RN
L6      245795 SEA FILE=HCAPLUS ABB=ON  PLU=ON  UREA
L7      101208 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L2
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      77/AP OR EP2006-773038/AP OR EP2007-809531/AP OR EP2027224/PN
      OR EP857190/PN OR FR1995-12588/AP OR FR2740461/PN OR HU1999-332
      /AP OR HU9900332/PN OR JP11500178/PN OR JP2002-299595/AP OR
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# 10/584673

JP2002-319537/AP OR JP2003-562180/AP OR JP2004100412/PN OR  
 JP2004149496/PN OR JP2005515283/PN OR JP2008-517019/AP OR  
 JP2008546873/PN OR "JP2989273 B"/PN OR KR1998-702992/AP OR  
 KR2004-33263/AP OR KR2005076570/PN OR KR99067054/PN OR  
 MX1998-3135/AP OR MX2007-15605/AP OR MX2007015605/PN OR  
 MX2008-15712/AP OR MX2008015712/PN OR MX9803135/PN OR NO1998-18  
 33/AP OR NO9801833/PN OR NZ1996-320342/AP OR NZ320342/PN OR  
 RU1995-111865/AP OR RU2099375/PN OR SE2002000207/PN OR  
 SE524461/PN OR SK1998-522/AP OR SK9800522/PN OR TW1996-112825/A  
 P OR TW448187/PN OR US1998-51737/AP OR US2000-631333/AP OR  
 US2004-537701P/AP OR US2005-155440/AP OR US20050131205/PN OR  
 US2006-584673/AP OR US2006-813458P/AP OR US2006-858738P/AP OR  
 US20060286302/PN OR US2007-818460/AP OR US20080160289/PN OR  
 US20090104043/PN OR US6369153/PN OR US7091308/PN OR WO200306230  
 6/PN OR WO2005073556/PN OR WO2006138311/PN OR WO9715617/PN)

L52 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 NOT L51

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L52 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2009:100305 HCAPLUS Full-text  
 DOCUMENT NUMBER: 150:238840  
 TITLE: Synthetic resin adhesive used in E0/E1 level flake  
 board  
 INVENTOR(S): Lin, Hongzhi  
 PATENT ASSIGNEE(S): DareGlobal Co., Ltd., Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101348699	A	20090121	CN 2008-10124683	20080829
PRIORITY APPLN. INFO.:			CN 2008-10124683	20080829

AB Title adhesive is melamine-modified ~~urea~~ urea-formaldehyde resin, and is prepared from melamine 4.0-5.0, ~~urea~~ 43.0-45.0, 48 weight% formaldehyde 48.0-51.0, adjuvant 1.00-1.10, polyvinyl alc. 0.20-0.22 %, and an amount of acid and alkali by reaction. The obtained adhesive has good ~~consentation~~ strength, appropriate curing time, good storage stability, and free formaldehyde content of 0.06-0.08 %, and can be used for producing E0/E1 level flake board with good quality with the advantages of low sizing amount, strong process adaptability and high curing speed.

CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 37

L52 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2009:69331 HCAPLUS Full-text  
 TITLE: Synthesis of low formaldehyde urea-formaldehyde resin  
 adhesive  
 AUTHOR(S): Wang, Bing; Ye, Xue-qin  
 CORPORATE SOURCE: School of Chemistry and Chemical Engineering, Zhaoqing  
 University, Zhaoqing, 526061, Peop. Rep. China  
 SOURCE: Guangzhou Huagong (2008), 36(3), 50-53  
 CODEN: GUHUEZ; ISSN: 1001-9677  
 PUBLISHER: Guangzhou Huagong Bianjibu  
 DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The producing method of ~~urea~~-formaldehyde resin adhesive that contained low free formaldehyde was introduced. The optimum conditions were obtained that the mole ratio between formaldehyde and ~~urea~~ was 1.2, dosage of polyvinyl alc. was 1.5, the temperature was 90°C and the time was 40min. Some factors of reacting such as pH, F/U molerative, reaction time and temperature affected the content of liquid ~~cement~~ formaldehyde were discussed. The appropriate addition of modifier was also fixed.

CC 37 (Plastics Manufacture and Processing)

L52 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2008:497152 HCAPLUS Full-text

DOCUMENT NUMBER: 151:246347

TITLE: Application of montmorillonite in formaldehyde based resins

AUTHOR(S): Cui, Huiwang; Du, Guanben

CORPORATE SOURCE: Nanjing Forestry University, Nanjing, 210037, Peop. Rep. China

SOURCE: Zhanjie (2008), 29(2), 42-44, 50

CODEN: ZHANET; ISSN: 1001-5922

PUBLISHER: Zhanjie Bianjibu

DOCUMENT TYPE: Journal; General Review

LANGUAGE: Chinese

AB A review, with 30 refs., is given on the application of montmorillonite in formaldehyde based resins, including its characteristics and applications in phenol formaldehyde resin, ~~urea~~ formaldehyde resin, melamine formaldehyde resin, styrene-acrylic acid coating, and ~~cement~~ based coating particularly.

CC 37-0 (Plastics Manufacture and Processing)

L52 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:436169 HCAPLUS Full-text

DOCUMENT NUMBER: 143:8560

TITLE: Phenol-formaldehyde foamed plastic composite product and its production

INVENTOR(S): Chen, Xiaoxia; Wang, Congguo; He, Jianfeng; Chen, Ciyang

PATENT ASSIGNEE(S): Guangzhou Qingtian New Material Research and Development Co., Ltd., Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 9 pp. CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
CN 1428372	A	20030709	CN 2001-130123	20011226
CN 1178971	C	20041208		

PRIORITY APPLN. INFO.: CN 2001-130123 20011226

AB The phenol-formaldehyde foamed plastic composite product consists of a surface layer and/or reinforcing gill and phenol-formaldehyde foamed plastic. The surface layer and/or reinforcing gill are color steel plate, galvanized Fe plate, glass fiber grid, Al foil, wood-imitated paper, ~~cement~~ plate, gypsum, glass fiber fabric, nonwoven fabric, flame retarding textile or paper, etc. The phenol-formaldehyde foamed plastic (for foamed plastic tubing) is composed of modified phenolic resin 100, surfactant 1-6, mixing aid 1-8, foaming agent 1-15, toughening agent 1-20, and catalyst 1-25 part. The phenol-formaldehyde foamed plastic (for foamed plastic plate) is composed of modified phenolic resin 100, surfactant 1-6, mixing aid 1-8, outer foaming agent 1-15, inner

foaming agent 1-5, and catalyst 1-25 part. The phenol-formaldehyde foamed plastic (for foamed plastic plate) may be composed of modified phenolic resin 100, surfactant 1-6, mixing aid 1-8, foaming agent 1-15, toughening agent 1-10, catalyst 1-25, and water 1-3 part. The surfactant is Dow Corning DC-190, DC-193, Union Carbide L-530, L-5,310, BASF F-127, F-108, silicone oil, etc. The mixing aid is polyethylene glycol alkylphenyl ether, castor oil, polyethylene glycol alkyl ether, emulsifying agent 16-1,831, methyl distearyl ammonium chloride, etc. The catalyst is phenolsulfonic acid, toluenesulfonic acid, xylenesulfonic acid, formic acid, HCl, H<sub>2</sub>SO<sub>4</sub>, etc. The inner foaming agent is isocyanate, carbonate, etc. The toughening agent is HTPB, furfural, polyether, etc. The modified phenolic resin is prepared by condensation polymerizing phenol with formaldehyde (at a ratio of 1:1.2-4.5) in the presence of modifying agent (polyvinyl alc., PEG), nylon, etc. at 85-100°, removing free formaldehyde with melamine and/or urea, neutralizing, and vacuum dewatering.

IC ICM C08L061-14  
ICS C08J009-00  
CC 37-6 (Plastics Manufacture and Processing)

L52 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2004:1005798 HCAPLUS Full-text

DOCUMENT NUMBER: 141:412192

TITLE: Acrylic resin-based aqueous dispersion adhesive compositions

INVENTOR(S): Alikin, V. N.; Budnikov, V. I.; Isupova, G. V.;  
Fedchenko, V. V.; Fedchenko, E. V.; Fedchenko, N. N.;  
Yampol'skii, V. B.

PATENT ASSIGNEE(S): Federal'noe Gosudarstvennoe Unitarnoe Predpriyatie  
"Permskii Zavod im. S. M. Kirova", Russia

SOURCE: Russ., No pp. given  
CODEN: RUXXE7

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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RU 2240335	C1	20041120	RU 2003-120489	20030704
PRIORITY APPLN. INFO.:			RU 2003-120489	20030704

AB An aqueous dispersion adhesive composition comprises an aqueous dispersion of Bu acrylate-methacrylic acid-Me methacrylate copolymer at a monomer unit ratio of (35-55):(0.5-3):(40-60) (25-40); Polyphobe TR 117 or sodium CM-cellulose as a thickener (0.5-4.0); ethylene glycol, diethylene glycol or di(2-ethylhexyl) sebacate as an antifreeze (2-5); Et cellosolve as a coalescing agent (0.8-3.1); a solution of isothiazolinone derivs., namely 1,2-dihydroxy-5,8,11-trioxadodecane, 1,3-bis(hydroxymethyl)urea and 1,6-dihydroxy-2,5-dioxahexane, as a biocide (0.05-0.50); and water (to 100%). The composition may addnl. comprise rosin esters (< 20%) and 25%-aqueous ammonia (< 0.5%). The adhesives have improved water resistance, frost resistance and may be used for bonding materials to paper, cardboard, concrete, plaster, wood (chipboard, fiberboard, plywood, veneer), and painted surfaces.

IC ICM C09J133-08

CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 37

IT Concrete  
Fiberboards  
Wood

(substrates; acrylic resin-based aqueous dispersion adhesive compns.)

IT 107-21-1, Ethylene glycol, uses 110-80-5, Ethyl cellosolve 111-46-6,

10/584673

Diethylene glycol, uses 122-62-3, Bis(2-ethylhexyl) sebacate 140-95-4, 1,3-Bis(hydroxymethyl)urea 1003-07-2D, Isothiazolinone, derivs. 1336-21-6, Ammonium hydroxide 3586-55-8, 1,6-Dihydroxy-2,5-dioxahexane 9004-32-4, Sodium carboxymethyl cellulose 251460-95-4, Polyphobe TR 117 272772-61-9, Parmetol A 26 679005-44-8, 1,2-Dihydroxy-5,8,11-trioxadodecane  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (acrylic resin-based aqueous dispersion adhesive compns.)

L52 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2003:696553 HCAPLUS Full-text  
 DOCUMENT NUMBER: 139:215313  
 TITLE: Hardenable dental compositions containing a polymerizable urea or thiourea to improve color stability as well as to reduce the potential toxic or narcotic properties  
 INVENTOR(S): Mitra, Sumita B.; Falsafi, Afshin  
 PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA  
 SOURCE: U.S. Pat. Appl. Publ., 15 pp., Cont.-in-part of U.S. Ser. No. 40,962, abandoned.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030166740	A1	20030904	US 2002-121326	20020412
US 7173074	B2	20070206		
CA 2471877	A1	20030717	CA 2002-2471877	20021218
WO 2003057792	A2	20030717	WO 2002-US40682	20021218
WO 2003057792	A3	20040401		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002360672	A1	20030724	AU 2002-360672	20021218
AU 2002360672	B2	20080501		
EP 1458831	A2	20040922	EP 2002-795950	20021218
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1610732	A	20050427	CN 2002-826495	20021218
JP 2005514490	T	20050519	JP 2003-558095	20021218
US 20070088096	A1	20070419	US 2006-610586	20061214
US 7541393	B2	20090602		

PRIORITY APPLN. INFO.:  
 US 2001-40962 B2 20011229  
 US 2002-121326 A 20020412  
 WO 2002-US40682 W 20021218

AB The compns., particularly for water-based dental cements, composites and adhesives, etc., include a polymerizable urea or thiourea compds. functioned as reductants in redox polymerization reactions and an oxidizing agent. In one example a liquid resin composition contained 0.045 g potassium persulfate



as oxidizing agent, 0.025 g allylthiourea and 0.025 g 4-tert-butyl-N,N-dimethylaniline as reducing agents.

IC ICM A61F002-00  
ICS C08K003-40  
INCL 523115000; 524494000  
CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 63  
ST urea thiourea polymerizable compd reductant hardenable dental compn;  
potassium persulfate oxidizing agent water based dental cement  
compn  
IT Dental materials and appliances  
(cements; hardenable dental compns. containing a polymerizable  
urea or thiourea reductants and an oxidizing agent)  
IT 868-77-9DP, 2-Hydroxyethyl methacrylate, polymer with  
2-isocyanatoethyl methacrylate reacted acrylic acid-itaconic acid  
copolymer 25948-33-8DP, Acrylic acid-itaconic acid copolymer, reaction  
product with 2-isocyanatoethyl methacrylate and polymer  
with 2-hydroxyethyl methacrylate 30674-80-7DP, 2-Isocyanatoethyl  
methacrylate, reaction product with acrylic acid-itaconic acid copolymer  
and polymer with 2-hydroxyethyl methacrylate 591231-18-4P 591231-19-5P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
(in hardenable dental compns. containing a polymerizable urea or  
thiourea reductants and an oxidizing agent)  
OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD  
(7 CITINGS)  
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2002:750559 HCAPLUS Full-text  
DOCUMENT NUMBER: 137:279969  
TITLE: Novel vinyl ester urea derivatives and their use for  
artificial mortar  
INVENTOR(S): Vogel, Martin; Gruen, Juergen; Schaetzle, Joachim;  
Weber, Christian; Schmidt, Clemens  
PATENT ASSIGNEE(S): Fischerwerke Artur Fischer G.m.b.H. & Co. K.-G.,  
Germany  
SOURCE: Ger. Offen., 14 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10115587	A1	20021002	DE 2001-10115587	20010329
WO 2002079293	A1	20021010	WO 2002-EP2384	20020305
W: AU, BR, CN, CZ, HU, JP, KR, NO, PL, RU, SG, SK, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
AU 2002302389	A1	20021015	AU 2002-302389	20020305
EP 1379570	A1	20040114	EP 2002-729961	20020305
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
HU 2003003641	A2	20040128	HU 2003-3641	20020305
CN 1500103	A	20040526	CN 2002-807658	20020305
CN 1304452	C	20070314		

10/584673

BR 2002008396	A	20040615	BR 2002-8396	20020305
JP 2004531602	T	20041014	JP 2002-578308	20020305
NO 2003004196	A	20031128	NO 2003-4196	20030919
US 20040092673	A1	20040513	US 2003-472639	20030919
PRIORITY APPLN. INFO.:			DE 2001-10115587	A 20010329
			WO 2002-EP2384	W 20020305

AB The title mix, useful for in-situ production of artificial mortar and for securing anchor bolts in bore holes, comprises  $\geq 2$  components which contain precursor compds. for hardenable urea resins. The mix provides improved bonding of the cured mortar with the wet surrounding materials and cures well at lower temperature. For example, a 2-component cartridge for securing a screw anchor comprised larger glass container containing urea resin based on  $\text{CH}_2(\text{C}_6\text{H}_4\text{NCO-p})_2$ , tert-butylaminoethyl methacrylate (60% in butanediol dimethacrylate) and quartz sand, and a smaller inner glass container containing Bz2O2 (50% in dicyclohexyl phthalate).

IC ICM C08G018-67  
ICS C08L075-14; C09D005-34; C04B024-12  
CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 58

IT ~~Cement~~  
(artificial mortar component; vinyl ester urea derivs. and their use for artificial mortar)

IT 97-90-5, Ethylene glycol dimethacrylate 2082-81-7, Butanediol dimethacrylate 3775-90-4, tert-Butylaminoethyl ~~methacrylate~~  
RL: TEM (Technical or engineered material use); USES (Uses)  
(curable ~~resin~~ component; vinyl ester ~~urea~~ derivs. and their use for artificial mortar)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L52 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1995:795503 HCAPLUS Full-text

DOCUMENT NUMBER: 123:207173

ORIGINAL REFERENCE NO.: 123:36739a,36742a

TITLE: ~~Cement~~ compositions, their hardened bodies, and manufacture of the hardened bodies

INVENTOR(S): Hatsuji, Hisakazu; Maehama, Mitsuhiro; Doi, Kyoto; Mizoguchi, Mitsusachi; Hasegawa, Masaki

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 07157354	A	19950620	JP 1993-340490	19931208
PRIORITY APPLN. INFO.:			JP 1993-340490	19931208

AB The compns. contain (i) hydraulic ~~cement~~, (ii) formaldehyde resin precursors, (iii)  $\alpha, \beta$ -unsatd. polybasic acids and/or saturated polybasic acids, (i.v.) organic compds. containing  $\geq 2$  OH groups, and optionally (v) (un)saturated polyester intermediates. The formaldehyde resin precursors may be precursors of phenolic resin, melamine resin, or ~~urea~~ resin. The ~~cement~~ compns. may contain fillers and/or additives. The additives may be poly(vinyl alc.), ~~polyacrylamide~~, or polyamides. Hardened bodies manufactured by heating the compns., optionally after forming into desired shapes, and the process are also claimed.

IC ICM C04B028-02  
ICS C04B024-26; C04B024-30; C08L061-00; C08L067-06; C08L077-00

ICI C04B028-02, C04B024-30, C04B024-04, C04B024-02, C04B024-26

CC 58-2 (Cement, Concrete, and Related Building Materials)  
Section cross-reference(s): 37, 38

ST ~~cement~~ formaldehyde resin precursor ~~concrete~~; dibasic acid ~~cement concrete~~; glycol ~~cement concrete~~

IT Polyamides, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(additive; hydraulic ~~cement~~ compns. containing formaldehyde resin precursor and dibasic acid and glycol (and polyester intermediate and additive) for ~~concrete~~ manufacture without water)

IT ~~Concrete~~  
(hydraulic ~~cement~~ compns. containing formaldehyde resin precursor and dibasic acid and glycol (and polyester intermediate and additive) for ~~concrete~~ manufacture without water)

IT Phenolic resins, preparation  
Polyesters, preparation  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)  
(hydraulic ~~cement~~ compns. containing formaldehyde resin precursor and dibasic acid and glycol (and polyester intermediate and additive) for ~~concrete~~ manufacture without water)

IT 9002-89-5, Poly(vinyl alcohol) 9003-05-8, Polyacrylamide 85510-39-0, Toresin EF 30T 90803-16-0, Accofloc N 100S 103735-92-8, Gohsenol KH 17S  
RL: MOA (Modifier or additive use); USES (Uses)  
(additive; hydraulic ~~cement~~ compns. containing formaldehyde resin precursor and dibasic acid and glycol (and polyester intermediate and additive) for ~~concrete~~ manufacture without water)

IT 9003-35-4P, Formaldehyde-phenol copolymer 26123-45-5P, Diethylene glycol-maleic anhydride-phthalic anhydride copolymer 26655-24-3P, Glycerol-phthalic anhydride copolymer 31672-49-8P, Diethylene glycol-maleic anhydride-phthalic anhydride-styrene copolymer  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)  
(hydraulic ~~cement~~ compns. containing formaldehyde resin precursor and dibasic acid and glycol (and polyester intermediate and additive) for ~~concrete~~ manufacture without water)

IT 80-04-6, Hydrogenated bisphenol A 85-44-9, Phthalic anhydride 88-99-3, Phthalic acid, processes 97-65-4, Itaconic acid, processes 99-14-9, Tricarballic acid 108-31-6, Maleic anhydride, processes 110-15-6, Succinic acid, processes 110-16-7, Maleic acid, processes 110-17-8, Fumaric acid, processes 111-46-6, Diethylene glycol, processes 116-37-0 121-91-5, Isophthalic acid, processes 124-04-9, Adipic acid, processes 9003-08-1, U-Van 22R 9011-05-6, U-Van 10R 78170-28-2, Shonol BRS 330  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(hydraulic ~~cement~~ compns. containing formaldehyde resin precursor and dibasic acid and glycol (and polyester intermediate and additive) for ~~concrete~~ manufacture without water)

L52 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1980:570851 HCAPLUS Full-text  
DOCUMENT NUMBER: 93:170851  
ORIGINAL REFERENCE NO.: 93:27202h,27203a  
TITLE: Treating waste drilling muds  
INVENTOR(S): Przybyla, Helena  
PATENT ASSIGNEE(S): Osrodek Badawczy Techniki Geologicznej, Pol.

10/584673

SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obratzsy,  
Tovarnye Znaki 1980, (23), 349-50.  
CODEN: URXXAF

DOCUMENT TYPE: Patent  
LANGUAGE: Russian  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 743584	A3	19800625	SU 1979-2744198	19790329
PL 124516	B1	19830131	PL 1978-205681	19780330
RO 76548	A1	19820412	RO 1979-96161	19790104
DD 142656	A5	19800709	DD 1979-211821	19790327

PRIORITY APPLN. INFO.: PL 1978-205681 A 19780330

AB The effectiveness of the title process [by adding 1-35 weight% fly ash containing up to 25% Al<sub>2</sub>O<sub>3</sub> and ap to 48% Cu oxide (with respect to the liquid phase) while mixing and hardening with a binder consisting of gypsum, water glass, ~~cement~~, urea resin 0.5-10.0 weight% with respect to the liquid phase] was increased in the detoxication of wastes from drilling muds by neutralizing their toxic component, by also adding an adsorbent consisting of diatomite, activated Ca, Al<sub>2</sub>O<sub>3</sub>, or infusorial earth (0.05-3.0 weight% with respect to the liquid phase); prior to addition of the binder, a coagulant consisting of slaked lime, Fe sulfate, or Al sulfate together with slaked lime (0.2-15.0 weight% with respect to the liquid phase) and a flocculant consisting of 4% aqueous ~~polyacrylamide~~ [9003-05-8] (1-5% by volume with respect to the liquid phase) were added.

IC C09K007-02

CC 51-2 (Fossil Fuels, Derivatives, and Related Products)  
Section cross-reference(s): 37, 59, 60

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(1 CITINGS)

L52 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1980:23750 HCAPLUS Full-text

DOCUMENT NUMBER: 92:23750

ORIGINAL REFERENCE NO.: 92:4031a,4034a

TITLE: A laminate which includes a layer of absorbent material impregnated with a polymer

INVENTOR(S): Kukuljevic Bassani de Sacci, Tomislav Lavoslav Franjo

PATENT ASSIGNEE(S): Patria Sport Vervaardigers (Eiendoms) Beperk, S. Afr.

SOURCE: S. African, 19 pp.

CODEN: SFXXAB

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 7803456	A	19790725	ZA 1978-3456	19780615

PRIORITY APPLN. INFO.: ZA 1978-3456 A 19780615

AB Laminates including a surface layer of absorbent material impregnated with a plastic were prepared by forming a laminate in which at least 1 surface layer was secured to the adjacent layer by an adhesive, impregnating the surface layer with a polymerizable material which was prevented from migrating to the adjacent layer by the adhesive, and polymerizing the material. Thus, a laminated board, suitable for shuttering, was formed by ~~cementing~~ relatively thin surface layers of peeled pine veneer to a relatively thick pine core comprising parallel boards with formaldehyde- ~~urea~~ copolymer (I) [9011-05-6]

adhesive and sealing the edges of the laminate by painting with I. The surface layer of the pine veneer was impregnated with ~~poly~~(Me methacrylate) [9011-14-7] by painting the surface with Me methacrylate to saturate it as far as the I layer and irradiating with gamma rays to give a hard, wear-resistant, tough, waterproof surface having an attractive appearance.

IC B32B  
CC 37-2 (Plastics Fabrication and Uses)  
Section cross-reference(s): 43  
ST ~~polymethyl methacrylate~~ impregnating wood laminate;  
urea formaldehyde adhesive wood laminate

L52 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1976:544335 HCAPLUS Full-text

DOCUMENT NUMBER: 85:144335

ORIGINAL REFERENCE NO.: 85:23141a,23144a

TITLE: Polymer-concrete mixture

INVENTOR(S): Shvidko, Ya. I.; Davydov, S. S.; Razumovskii, A. B.

PATENT ASSIGNEE(S): Moscow Institute of Railroad Transport Engineers, USSR

SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obratzsy, Tovarnye Znaki 1976, 53(27), 70.

CODEN: URXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
SU 522157	A1	19760725	SU 1975-2136755	19750523
PRIORITY APPLN. INFO.:			SU 1975-2136755	A 19750523
AB	NH4Cl and H3PO4 were used as hardening agents and the granules of porous glass and (polyacrylonitrile (I) fiber were used as filler to increase the sp. impact strength of polymer-concrete materials. Thus, a polymer-concrete mixture was prepared containing a urea [57-13-6] resin 8-19.8, NH4Cl 0.35-1.0, H3PO4 0.05-0.2, granules of porous glass 23.9-39.0, quartz sand 40-50.8, microfiller 5.5-8.9, and a I fiber 0.1-2.4 weight%.			
IC	C04B025-02			
CC	37-3 (Plastics Fabrication and Uses)			
ST	<del>acrylic fiber polymer concrete</del> ; glass filler <del>polymer concrete</del> ; ammonium chloride crosslinking urea resin; phosphoric acid crosslinking urea resin; sand <del>acrylic acid polymer concrete</del>			
IT	Crosslinking catalysts (ammonium chloride-phosphoric acid, for impact-resistant polymer concretes containing urea resins)			
IT	Acrylic fibers RL: USES (Uses) (fillers, for impact-resistant polymer concrete)			
IT	Sand RL: USES (Uses) (polymer concrete containing, impact-resistant)			
IT	Glass RL: USES (Uses) (porous, fillers, for impact-resistant polymer concrete)			
IT	7664-38-2, uses and miscellaneous 12125-02-9, uses and miscellaneous RL: CAT (Catalyst use); USES (Uses) (crosslinking catalysts, for urea resin-containing impact resistant polymer concretes)			
IT	57-13-6, uses and miscellaneous RL: USES (Uses)			

(polymer ~~concrete~~ containing, impact-resistant, crosslinking catalysts and fillers for)

L52 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1976:425366 HCAPLUS Full-text

DOCUMENT NUMBER: 85:25366

ORIGINAL REFERENCE NO.: 85:4091a,4094a

TITLE: Reactions in glass-ionomer ~~cements~~: IV.  
Effect of chelating comonomers on setting behavior

AUTHOR(S): Wilson, A. D.; Crisp, S.; Ferner, A. J.

CORPORATE SOURCE: Dep. Ind., Lab. Gov. Chem., London, UK

SOURCE: Journal of Dental Research (1976), 55(3), 489-95  
CODEN: JDREAF; ISSN: 0022-0345

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Using an oscillating rheometer, it was found that certain chelating comonomers, the hydroxycarboxylates, such as tartaric acid [87-69-4] and citric acid [77-92-9], could improve the setting characteristics of the glass-ionomer ~~cement~~ system when added to the poly(acrylic acid) [9003-01-4] solution. The acid chelates probably assign the extraction of metal ions from the glass and also tend to hold them in solution, preventing premature ion binding of the polyanion chains. The effect is to increase the rate of hardening without reducing the working time, which may even be increased. Tartaric acid, the most effective comonomer, can form a chelate bridge between Al atoms, and this metal complex probably acts as a flexible bridge structure linking polyanion chains. This mechanism offers some steric advantages over a simple salt bridge.

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 37

IT Dental materials and fillings

(glass-ionomer ~~cements~~ containing poly(acrylic acid), setting of, chelating comonomers effect on)

IT 13963-57-0 25322-68-3 57-13-6, uses and miscellaneous  
60-00-4, uses and miscellaneous 69-72-7, uses and miscellaneous  
76-30-2 77-92-9, uses and miscellaneous 87-69-4, uses and  
miscellaneous 123-54-6, uses and miscellaneous 139-13-9 141-43-5,  
uses and miscellaneous 303-07-1

RL: USES (Uses)

(chelating comonomer, glass-ionomer dental poly(  
acrylic acid) ~~cement~~ setting in relation to)

IT 9003-01-4

RL: BIOL (Biological study)

(glass-ionomer dental ~~cement~~ containing, setting of, chelating  
comonomers effect on)

OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS  
RECORD (11 CITINGS)

=> d his nof

(FILE 'HOME' ENTERED AT 10:21:32 ON 20 NOV 2009)

FILE 'HCAPLUS' ENTERED AT 10:23:41 ON 20 NOV 2009

L1 1 SEA ABB=ON PLU=ON US20090104043/PN  
D IALL

FILE 'REGISTRY' ENTERED AT 10:25:23 ON 20 NOV 2009

L2 1 SEA ABB=ON PLU=ON 57-13-6/RN  
L3 1 SEA ABB=ON PLU=ON 9003-05-8/RN  
L4 1 SEA ABB=ON PLU=ON 9003-01-4/RN  
L5 1 SEA ABB=ON PLU=ON 25087-26-7/RN

FILE 'HCAPLUS' ENTERED AT 10:27:29 ON 20 NOV 2009

L6 245795 SEA ABB=ON PLU=ON UREA  
L7 101208 SEA ABB=ON PLU=ON L2  
L8 30803 SEA ABB=ON PLU=ON L7 (L) (TEM OR USES)/RL  
L9 4275 SEA ABB=ON PLU=ON CARBAMIDE OR CARBONYL DIAMIDE OR CARBONYL  
DIAMINE  
L10 179440 SEA ABB=ON PLU=ON POLYACRYLAMIDE OR POLYMETHACRYLAMIDE OR  
POLYVINYL ALCOHOL OR POLYVINYLPIRROLIDONE OR POLYVINYLACETATE  
L11 20168 SEA ABB=ON PLU=ON L3 (L) (TEM OR USES)/RL  
L12 49723 SEA ABB=ON PLU=ON POLYACRYLATE OR (POLYACRYLIC OR POLYMETHACR  
YLIC) (W)ACID  
L13 QUE ABB=ON PLU=ON (POLYACRYLIC# OR POLYMETHACRYLIC# OR  
POLYMETHACRYLATE) OR (POLY) (A) (ACRYLIC# OR ACRYLATE# OR  
METHACRYLIC# OR METHACRYLATE#)  
L14 QUE ABB=ON PLU=ON (POLY OR POLYM? OR COPOLYM? OR HOPOLYM? OR  
RESIN?) (2A) (ACRYLATE# OR METHACRYLATE# OR ACRYLIC# OR  
METHACRYLIC#)  
L15 22153 SEA ABB=ON PLU=ON (L4 OR L5) (L) (TEM OR USES)/RL  
L16 5236 SEA ABB=ON PLU=ON (L6 OR L8 OR L9) (L) (L10 OR L11)  
L17 3356 SEA ABB=ON PLU=ON (L6 OR L8 OR L9) (L) ((L13 OR L14 OR L15))  
  
L18 162 SEA ABB=ON PLU=ON L16 AND 37/SC,SX  
L19 389 SEA ABB=ON PLU=ON L17 AND 37/SC,SX  
E CONCRETE/CT  
E E3+ALL  
L20 86884 SEA ABB=ON PLU=ON CONCRETE+UF/CT  
E PUMPS/CT  
E E3+ALL  
L21 20349 SEA ABB=ON PLU=ON PUMPS/CT  
L22 133498 SEA ABB=ON PLU=ON CONCRETE  
L23 298142 SEA ABB=ON PLU=ON PUMP?  
L24 2 SEA ABB=ON PLU=ON L18 AND L22  
L25 3 SEA ABB=ON PLU=ON L19 AND L22  
D SCA TI HIT L24  
D SCA L25 TI HIT  
L26 6 SEA ABB=ON PLU=ON CEMENT? AND L18  
L27 6 SEA ABB=ON PLU=ON CEMENT? AND L19  
D SCA TI HIT L26  
D SCA TI HIT L27  
L28 13 SEA ABB=ON PLU=ON (L24 OR L25 OR L26 OR L27)  
SAVE TEMP L28 MIC673HCAP/A

FILE 'WPIX' ENTERED AT 10:44:07 ON 20 NOV 2009

L29 4142 SEA ABB=ON PLU=ON (L6 OR L9) AND L10

# 10/584673

L30 5748 SEA ABB=ON PLU=ON (L6 OR L9) AND (L13 OR L14)  
L31 48 SEA ABB=ON PLU=ON L29 AND L22  
L32 114 SEA ABB=ON PLU=ON L30 AND L22  
L33 1209 SEA ABB=ON PLU=ON CONCRETE PUMP?  
L34 1 SEA ABB=ON PLU=ON L31 AND L33  
L35 1 SEA ABB=ON PLU=ON L32 AND L33  
L36 1 SEA ABB=ON PLU=ON L29 AND L33  
D TI KWIC  
L37 42 SEA ABB=ON PLU=ON L31 AND (MIX? OR COMPOSITION# OR BLEND? OR  
FLOWABLE)  
L38 4 SEA ABB=ON PLU=ON L37 AND (PUMP?)  
D SCA  
L39 43094 SEA ABB=ON PLU=ON (CONCRETE OR CEMENT OR ASPHALT) (2A) (MIX?  
OR COMPOSITION# OR BLEND? OR FLOWABLE)  
L40 10 SEA ABB=ON PLU=ON L31 AND L39  
L41 19 SEA ABB=ON PLU=ON L32 AND L39  
L42 26 SEA ABB=ON PLU=ON L40 OR L41  
L43 1042040 SEA ABB=ON PLU=ON (COAT# OR COATED OR COATING OR LUBRICAT?  
OR ANTIFRICT? OR ANTI(W)FRICT?)  
L44 8 SEA ABB=ON PLU=ON L42 AND L43  
D TI KWIC  
L45 2 SEA ABB=ON PLU=ON L42 AND (PRIMER OR PRIMING OR PRIME)  
L46 8 SEA ABB=ON PLU=ON L44 OR L45  
SAVE TEMP L46 MIC673WPIX/A

FILE 'STNGUIDE' ENTERED AT 10:53:43 ON 20 NOV 2009

FILE 'COMPENDEX, INSPEC, ICONDA, PASCAL' ENTERED AT 11:01:28 ON 20 NOV  
2009

L47 0 SEA ABB=ON PLU=ON L40  
L48 2 SEA ABB=ON PLU=ON L41  
D SCA  
D TI KWIC  
D TI KWIC 2  
L49 0 SEA ABB=ON PLU=ON L31 AND L43  
L50 2 SEA ABB=ON PLU=ON L32 AND L43  
D SCA

FILE 'WPIX' ENTERED AT 11:05:19 ON 20 NOV 2009

SEL L46 AP PN  
L51 10 SEA ABB=ON PLU=ON (WO1996-FR1639/AP OR WO2003-SE117/AP OR  
WO2006-US22990/AP OR WO2007-US13912/AP OR AU1996-73068/AP OR  
CA2006-2612010/AP OR CA2007-2649178/AP OR CN1996-197863/AP OR  
CN2003-802699/AP OR JP1997-516350/AP OR SE2002-207/AP OR  
US2004-501024/AP OR WO2005-US1980/AP OR WO2007146353/PN OR  
AU2003-237227/AP OR AU2003237227/PN OR AU718444/PN OR AU9673068  
/PN OR BR1996-11249/AP OR BR9611249/PN OR CA2612010/PN OR  
CA2649178/PN OR "CN1074432 C"/PN OR CN1200747/PN OR "CN1279089  
C"/PN OR CN1622968/PN OR CZ1998-1235/AP OR CZ9801235/PN OR  
EP1468040/PN OR EP1907491/PN OR EP1996-934942/AP OR EP2003-7318  
77/AP OR EP2006-773038/AP OR EP2007-809531/AP OR EP2027224/PN  
OR EP857190/PN OR FR1995-12588/AP OR FR2740461/PN OR HU1999-332  
/AP OR HU9900332/PN OR JP11500178/PN OR JP2002-299595/AP OR  
JP2002-319537/AP OR JP2003-562180/AP OR JP2004100412/PN OR  
JP2004149496/PN OR JP2005515283/PN OR JP2008-517019/AP OR  
JP2008546873/PN OR "JP2989273 B"/PN OR KR1998-702992/AP OR  
KR2004-33263/AP OR KR2005076570/PN OR KR99067054/PN OR  
MX1998-3135/AP OR MX2007-15605/AP OR MX2007015605/PN OR  
MX2008-15712/AP OR MX2008015712/PN OR MX9803135/PN OR NO1998-18  
33/AP OR NO9801833/PN OR NZ1996-320342/AP OR NZ320342/PN OR



**10/584673**

RU1995-111865/AP OR RU2099375/PN OR SE2002000207/PN OR  
SE524461/PN OR SK1998-522/AP OR SK9800522/PN OR TW1996-112825/A  
P OR TW448187/PN OR US1998-51737/AP OR US2000-631333/AP OR  
US2004-537701P/AP OR US2005-155440/AP OR US20050131205/PN OR  
US2006-584673/AP OR US2006-813458P/AP OR US2006-858738P/AP OR  
US20060286302/PN OR US2007-818460/AP OR US20080160289/PN OR  
US20090104043/PN OR US6369153/PN OR US7091308/PN OR WO200306230  
6/PN OR WO2005073556/PN OR WO2006138311/PN OR WO9715617/PN)

FILE 'HCAPLUS' ENTERED AT 11:05:47 ON 20 NOV 2009  
L52 12 SEA ABB=ON PLU=ON L28 NOT L51  
D QUE L46

FILE 'WPIX' ENTERED AT 11:07:22 ON 20 NOV 2009  
D L46 1-8 IALL ABEQ TECH ABEX

FILE 'HCAPLUS' ENTERED AT 11:07:26 ON 20 NOV 2009  
D QUE L52  
D L52 1-12 IBIB ABS HITIND

10/584673

\*\*\*\*\* SEARCH HISTORY \*\*\*\*\*

=> d his nofi

(FILE 'HOME' ENTERED AT 10:21:32 ON 20 NOV 2009)

FILE 'HCAPLUS' ENTERED AT 10:23:41 ON 20 NOV 2009

L1 1 SEA ABB=ON PLU=ON US20090104043/PN  
D IALL

FILE 'REGISTRY' ENTERED AT 10:25:23 ON 20 NOV 2009

L2 1 SEA ABB=ON PLU=ON 57-13-6/RN  
L3 1 SEA ABB=ON PLU=ON 9003-05-8/RN  
L4 1 SEA ABB=ON PLU=ON 9003-01-4/RN  
L5 1 SEA ABB=ON PLU=ON 25087-26-7/RN

FILE 'HCAPLUS' ENTERED AT 10:27:29 ON 20 NOV 2009

L6 245795 SEA ABB=ON PLU=ON UREA  
L7 101208 SEA ABB=ON PLU=ON L2  
L8 30803 SEA ABB=ON PLU=ON L7 (L) (TEM OR USES)/RL  
L9 4275 SEA ABB=ON PLU=ON CARBAMIDE OR CARBONYL DIAMIDE OR CARBONYL  
DIAMINE  
L10 179440 SEA ABB=ON PLU=ON POLYACRYLAMIDE OR POLYMETHACRYLAMIDE OR  
POLYVINYL ALCOHOL OR POLYVINYLPIRROLIDONE OR POLYVINYLACETATE  
L11 20168 SEA ABB=ON PLU=ON L3 (L) (TEM OR USES)/RL  
L12 49723 SEA ABB=ON PLU=ON POLYACRYLATE OR (POLYACRYLIC OR POLYMETHACR  
YLIC) (W)ACID  
L13 QUE ABB=ON PLU=ON (POLYACRYLIC# OR POLYMETHACRYLIC# OR  
POLYMETHACRYLATE) OR (POLY) (A) (ACRYLIC# OR ACRYLATE# OR  
METHACRYLIC# OR METHACRYLATE#)  
L14 QUE ABB=ON PLU=ON (POLY OR POLYM? OR COPOLYM? OR HOPOLYM? OR  
RESIN?) (2A) (ACRYLATE# OR METHACRYLATE# OR ACRYLIC# OR  
METHACRYLIC#)  
L15 22153 SEA ABB=ON PLU=ON (L4 OR L5) (L) (TEM OR USES)/RL  
L16 5236 SEA ABB=ON PLU=ON (L6 OR L8 OR L9) (L) (L10 OR L11)  
L17 3356 SEA ABB=ON PLU=ON (L6 OR L8 OR L9) (L) ((L13 OR L14 OR L15))  
  
L18 162 SEA ABB=ON PLU=ON L16 AND 37/SC,SX  
L19 389 SEA ABB=ON PLU=ON L17 AND 37/SC,SX  
E CONCRETE/CT  
E E3+ALL  
L20 86884 SEA ABB=ON PLU=ON CONCRETE+UF/CT  
E PUMPS/CT  
E E3+ALL  
L21 20349 SEA ABB=ON PLU=ON PUMPS/CT  
L22 133498 SEA ABB=ON PLU=ON CONCRETE  
L23 298142 SEA ABB=ON PLU=ON PUMP?  
L24 2 SEA ABB=ON PLU=ON L18 AND L22  
L25 3 SEA ABB=ON PLU=ON L19 AND L22  
D SCA TI HIT L24  
D SCA L25 TI HIT  
L26 6 SEA ABB=ON PLU=ON CEMENT? AND L18  
L27 6 SEA ABB=ON PLU=ON CEMENT? AND L19  
D SCA TI HIT L26  
D SCA TI HIT L27  
L28 13 SEA ABB=ON PLU=ON (L24 OR L25 OR L26 OR L27)  
L\*\*\* DEL 9 S L28 AND (AY<2004 OR PY<2004 OR PRY<2004)  
D SCA TI HIT  
L\*\*\* DEL 13 S L28 AND 37/SC,SX  
L\*\*\* DEL 13 S L30 NOT PHARMAC?

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L\*\*\* DEL 1 S L28 AND L1  
SAVE TEMP L28 MIC673HCAP/A

FILE 'WPIX' ENTERED AT 10:44:07 ON 20 NOV 2009

L\*\*\* DEL 3958 S (L6 OR L8) AND L10  
L29 4142 SEA ABB=ON PLU=ON (L6 OR L9) AND L10  
L30 5748 SEA ABB=ON PLU=ON (L6 OR L9) AND (L13 OR L14)  
L31 48 SEA ABB=ON PLU=ON L29 AND L22  
L32 114 SEA ABB=ON PLU=ON L30 AND L22  
L33 1209 SEA ABB=ON PLU=ON CONCRETE PUMP?  
L34 1 SEA ABB=ON PLU=ON L31 AND L33  
L35 1 SEA ABB=ON PLU=ON L32 AND L33  
L36 1 SEA ABB=ON PLU=ON L29 AND L33  
D TI KWIC  
L37 42 SEA ABB=ON PLU=ON L31 AND (MIX? OR COMPOSITION# OR BLEND? OR FLOWABLE)  
L38 4 SEA ABB=ON PLU=ON L37 AND (PUMP?)  
D SCA  
L39 43094 SEA ABB=ON PLU=ON (CONCRETE OR CEMENT OR ASPHALT) (2A) (MIX? OR COMPOSITION# OR BLEND? OR FLOWABLE)  
L40 10 SEA ABB=ON PLU=ON L31 AND L39  
L41 19 SEA ABB=ON PLU=ON L32 AND L39  
L42 26 SEA ABB=ON PLU=ON L40 OR L41  
L43 1042040 SEA ABB=ON PLU=ON (COAT# OR COATED OR COATING OR LUBRICAT? OR ANTIFRICT? OR ANTI(W)FRICT?)  
L44 8 SEA ABB=ON PLU=ON L42 AND L43  
D TI KWIC  
L45 2 SEA ABB=ON PLU=ON L42 AND (PRIMER OR PRIMING OR PRIME)  
L46 8 SEA ABB=ON PLU=ON L44 OR L45  
SAVE TEMP L46 MIC673WPIX/A

FILE 'STNGUIDE' ENTERED AT 10:53:43 ON 20 NOV 2009

FILE 'COMPENDEX, INSPEC, ICONDA, PASCAL' ENTERED AT 11:01:28 ON 20 NOV 2009

L47 0 SEA ABB=ON PLU=ON L40  
L48 2 SEA ABB=ON PLU=ON L41  
D SCA  
D TI KWIC  
D TI KWIC 2  
L49 0 SEA ABB=ON PLU=ON L31 AND L43  
L50 2 SEA ABB=ON PLU=ON L32 AND L43  
D SCA

FILE 'WPIX' ENTERED AT 11:05:19 ON 20 NOV 2009

SEL L46 AP PN  
L51 10 SEA ABB=ON PLU=ON (WO1996-FR1639/AP OR WO2003-SE117/AP OR WO2006-US22990/AP OR WO2007-US13912/AP OR AU1996-73068/AP OR CA2006-2612010/AP OR CA2007-2649178/AP OR CN1996-197863/AP OR CN2003-802699/AP OR JP1997-516350/AP OR SE2002-207/AP OR US2004-501024/AP OR WO2005-US1980/AP OR WO2007146353/PN OR AU2003-237227/AP OR AU2003237227/PN OR AU718444/PN OR AU9673068/PN OR BR1996-11249/AP OR BR9611249/PN OR CA2612010/PN OR CA2649178/PN OR "CN1074432 C"/PN OR CN1200747/PN OR "CN1279089 C"/PN OR CN1622968/PN OR CZ1998-1235/AP OR CZ9801235/PN OR EP1468040/PN OR EP1907491/PN OR EP1996-934942/AP OR EP2003-731877/AP OR EP2006-773038/AP OR EP2007-809531/AP OR EP2027224/PN OR EP857190/PN OR FR1995-12588/AP OR FR2740461/PN OR HU1999-332/AP OR HU9900332/PN OR JP11500178/PN OR JP2002-299595/AP OR JP2002-319537/AP OR JP2003-562180/AP OR JP2004100412/PN OR

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KR2004-33263/AP OR KR2005076570/PN OR KR99067054/PN OR  
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MX2008-15712/AP OR MX2008015712/PN OR MX9803135/PN OR NO1998-18  
33/AP OR NO9801833/PN OR NZ1996-320342/AP OR NZ320342/PN OR  
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P OR TW448187/PN OR US1998-51737/AP OR US2000-631333/AP OR  
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US20090104043/PN OR US6369153/PN OR US7091308/PN OR WO200306230  
6/PN OR WO2005073556/PN OR WO2006138311/PN OR WO9715617/PN)

FILE 'HCAPLUS' ENTERED AT 11:05:47 ON 20 NOV 2009  
L52 12 SEA ABB=ON PLU=ON L28 NOT L51  
D QUE L46

FILE 'WPIX' ENTERED AT 11:07:22 ON 20 NOV 2009  
D L46 1-8 IALL ABEQ TECH ABEX

FILE 'HCAPLUS' ENTERED AT 11:07:26 ON 20 NOV 2009  
D QUE L52  
D L52 1-12 IBIB ABS HITIND